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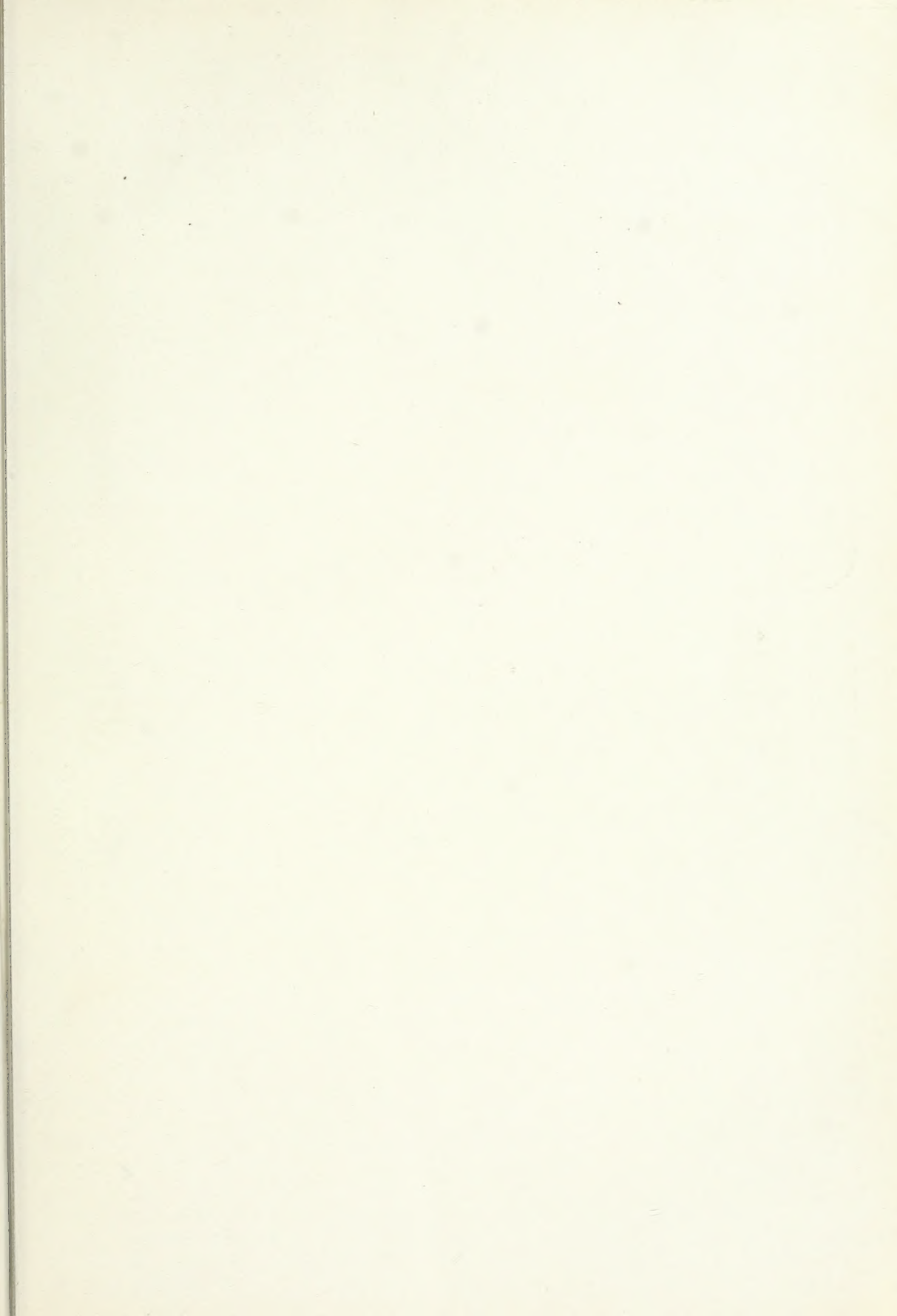
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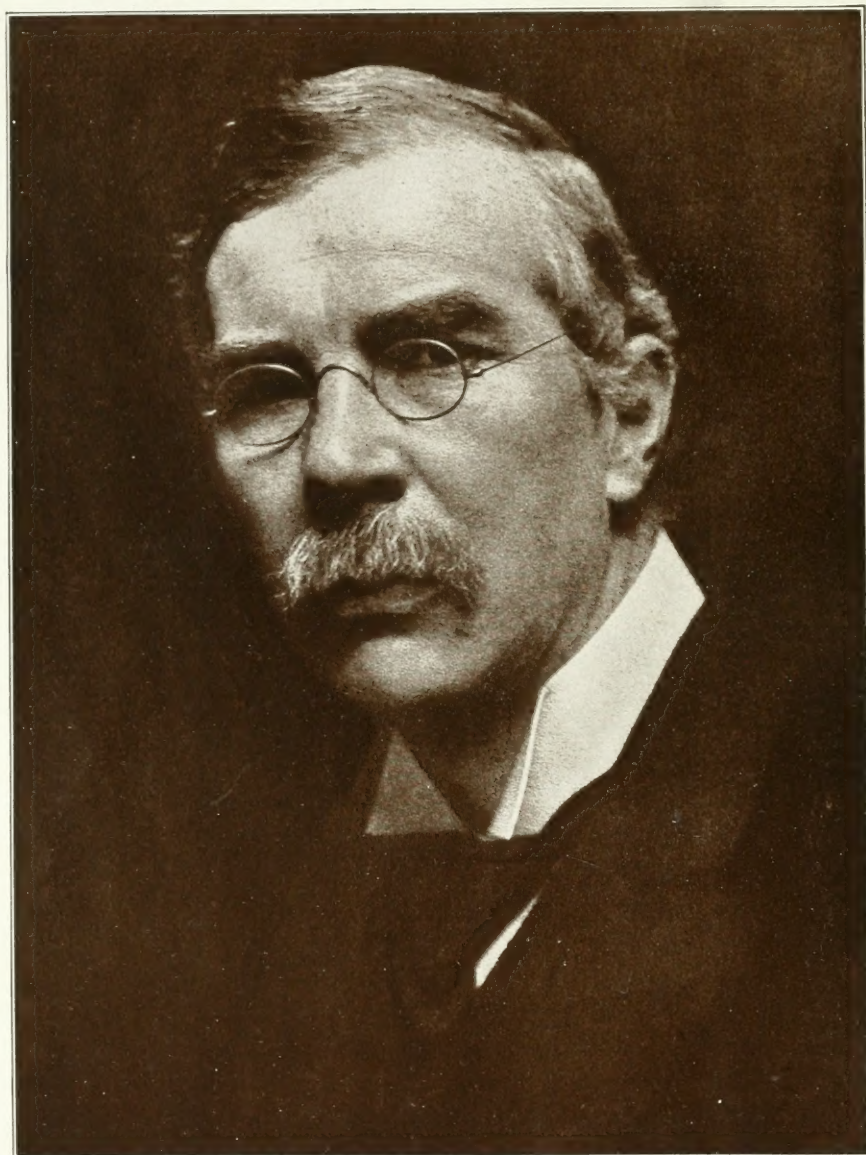
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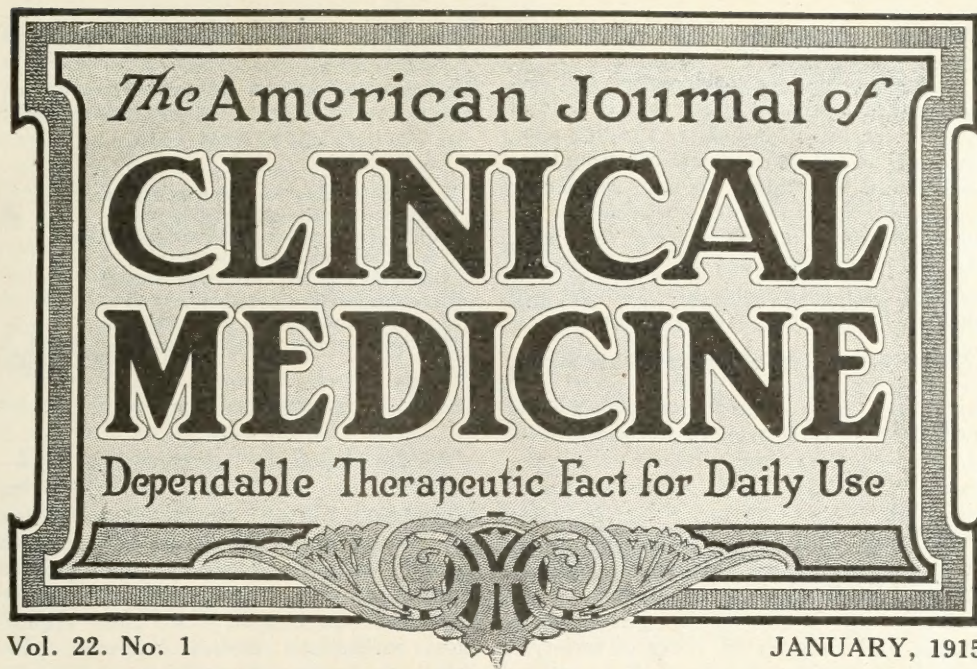


A. G. Wright



SIR ALMROTH WRIGHT IS THE FATHER OF MODERN BACTERIN THERAPY. HIS DISCOVERY OF THE OPSONINS BROUGHT IN A NEW EPOCH IN THERAPY. SEE DOCTOR ACHARD'S ARTICLE ON PAGE 23





The New Year

IT SEEMS almost like mockery to be wishing one another a Happy New Year in these sad times. With the stars falling from Heaven, and Christ in the tomb, and war, pestilence and famine abroad, and men's hearts failing them for fear, and God knows what fate or doom hanging over the world's head, how shall we, can we, bid each other a Happy New Year? Or, what meaning shall such a greeting have upon our lips?

Never in the history of the modern world, I am sure, have New Year's greetings been exchanged under conditions of such solemn and ominous portent as at the opening of this year of grace nineteen hundred and fifteen. Not since the great event that ushered in the Christian era has there been such a portentous upgathering of cosmic events as that which now confronts the peoples of the earth. We cannot doubt that we are beholding—nay, taking part in—some great and terrible day of the Lord. The sun has been turned into darkness and the moon into blood. It almost seems as though the New Testament prophecy were finding fulfilment: that "in those days shall be tribulation such as there hath not been the like from the beginning of the creation which God created until now."

In the midst of such conditions, can we wish each other a glad New Year with the same light hearts and happy faces, and confident, hopeful minds with which in the years gone by we have been wont to meet and greet this ever-joyous festival occasion?

Yes, I feel certain we can. Not, maybe, with quite such *light* hearts, but, yet, with hopefulness and confidence, not only equal to, but much higher and much deeper than that which any other New Year's Day in our lives has inspired.

Let us look about with fearless eye and see. First of all, there is no occasion for panic. I have said that the times are portentous and ominous; but they portend good and not evil. Out of this hell there will issue something far better than any living soul has yet dreamed. The Old World is in its death-throes; nor is it likely that we can escape the shock of the catastrophe. But after all, we in America belong to the new era, and we, at least, can look through it and beyond it. We scarcely can doubt that the convulsion we are witnessing is not so much a death-throe as a birth-pang, heralding the birth of an era almost—and I speak reverently—as glorious as that which was ushered in by darkness and earth-

quake and the rending of the temple's veil nearly two thousand years ago.

It is not a time for consternation and despair, but for faith and optimism. It is not a time to run hither and thither, calling upon the rocks to fall upon us and the mountains to hide us; but, rather, to keep steadfastly and quietly at our tasks and with solemn joy await the dawn, not of a New Year only, but of a new, more happy era. However disquieting and frightening the darkness and the quaking may be, we are sure that

"God's in His Heaven—all's right with the world,"

and if the close of the year now ended has been the most cataclysmic of all the centuries, the course of the coming year will witness the dawn of the Golden Age, for which all the past was made.

The older order was bound to pass away. It is, indeed, toward this that everything has been looking and moving through all the centuries. It hardly could pass—such a settled and deep-rooted order of society—without convulsion; without shock to nations and institutions and the sufferings of men and women and children. "Wo to them that are with child, and that give suck, in those days!" Our hearts are sore for the stricken millions. Let us help them to the utmost; let us not harden our hearts with any specious sophistry about prolonging the war by our gifts. And we cannot help being shaken a little by the crash of worlds all around us. In a sense, it is more terrible at a distance, as a spectacle, than it is in the very midst of the turmoil, as an experience. And, yet, as Edward Markham sings:

In spite of all the ruin and the wrong,
Deep in my heart I hear a secret song—

the song of the New Era, the Golden Age, the El Dorado, which is to be born out of the present cataclysm—which is at this moment in the agony of birth.

This is why we are to wish one another a Happy New Year at this time with more than ordinary earnestness and significance. Not with the light, perfunctory greeting of other years, but with the deep and solemn joy of those who went around, twenty centuries ago, saying, as they met each other on the streets, "The Lord is risen indeed." For, this year is to be the greatest of all years since the birth of Jesus, the Christ. The coming days are big with unimagined wonders. I, for one, am profoundly glad that I am to see its stupendous unfolding. I wish you a Happy New

Year, brother. I feel, as you do, the "touch of mortal blight" that seems to grip the earth,

"And, yet, the ramparts of my heart are strong,
And in my heart sounds on the eternal song."

A HAPPY NEW YEAR!

Was he not kind to you, this dead old year?
Did he not give enough of earthly store?
Enough of love, and laughter, and good cheer?
It is not well to hate him for the pain
He brought you, and the sorrows manifold.
To pardon him these hurts still I am fain,
For in the panting period of his reign
He brought me new wounds, but he healed the old.

—Paul Lawrence Dunbar.

"LET'S ALL BOOST"

We are hitting the line hard these days—we have to do it. There is war in America as well as in Europe—though we are fighting our battles with dollars instead of with bullets. Anyhow, we need the ammunition, so that we can keep on trying to make CLINICAL MEDICINE the biggest, best, most helpful, most enthusiastic medical magazine published for the general practitioner.

The ammunition is subscriptions, and *we want yours*. If you are not a regular reader, and if you like this number, you are respectfully invited to join our big family. If you are one of our old friends *please renew promptly*. And—won't you get into the recruiting service? Our big ambition is to add five thousand new subscribers in the next three months. We can do it if you will help. Let's all boost!

BREAD, AND THE COLON-BACILLUS

Some startling statistics—filling the mind with abhorrence—have been made public, through its weekly *Bulletin*, by the New York Health Department. These investigations, conducted in the city's research-laboratory, were directed toward determining the contamination of the various kinds of bread as sold in the local markets; and the results disclosed are truly disgusting.

That, on the whole, people are not as cleanly and sanitary in their habits as they should be is well understood, of course, by those more sensitive and particular, but the frequently actually dangerous consequences of their slovenliness, or worse, is less generally realized.

In the matter of the handling of our edibles, just consider how that is being done; just open your eyes to the fact that our foods, in the process of preparing and vending,

are exposed to all the dirt and filth of the environment as well as to the attacks of prowling vermin, while the venders (and all too often the customers) manipulate the articles with unspeakably dirty hands that are not washed the long day through, and but imperfectly in the morning. Indeed, it is not at all uncommon for grocers and butchers to attend alternately to the horse and stable and between times wait upon customers, merely wiping hands against their filth-laden "pants"; in truth, this writer has seen them thus "clean" their hands after wiping away a thick-oozing gonorrheal discharge, against which a similar trimming of a purulent catarrhal proboscis hardly deserves mentioning.

However, although women generally are more fastidious, there is more sinning of this nature in the kitchens than is believed, the apron and the calico skirt having much to answer for; as to washing—cleansing—their hands frequently, and, in particular, after intimate contact with the usually unexposed portions of the body, many never think of it; preparing meals and manipulating baby will alternate in cheerful sequence.

In view of these undisputably deplorable conditions, the figures given out by the Health Commissioner can not astonish an observant person, although they should lead to a more vigorous crusade in behalf of public no less than private personal cleanliness and sanitary precautions. The present tests were rather limited in number, but they go to confirm similar ones previously conducted by others; they also demonstrate the great superiority of machine-handled and wrapped bread over the ordinary kind.

The outstanding feature, against which this protest is aimed, is, the prevailing presence of the colon-bacillus—upon the real significance of which we surely will not need to dwell here; for, the imagination refuses to follow. These, briefly, are the findings:

Bread which had not been touched by human hands, after careful unwrapping was distributed among different classes of people to handle; these being, respectively, clerks, dishwashers, and stablemen. In these samples, the colon-bacillus was proven to be absent. However, after these specimens had been manipulated as mentioned and then used for producing cultures under proper precautions, the colon-bacillus was found in every one of them.

In another series, unwrapped loaves of bread were purchased in stores, some of the bread kept in cases, some displayed on the counter. Of these samples, 66 percent were

contaminated with the abhorrent bacillus coli—a microbe derived from human excrement alone. Furthermore, the labels were taken from two other loaves and subjected to bacteriologic treatment, and this witness to people's inexcusable uncleanness and filthy habits, here also was discovered.

In this connection, the *Bulletin* mentioned reminds us of similar findings by the United States Department of Agriculture, as published in *The American Journal of Public Health* for September last; namely, that 62 percent of unwrapped bread was contaminated with bacilli of the colon group, while of the bakery-wrapped bread only 7 percent showed its presence.

The one plain duty of every man is to face the future as he faces the present, regardless of what it may have in store for him, and, turning toward the light, as he sees the light, to play his part manfully as a man among men.

—Theodore Roosevelt.

THE PERSONAL EQUATION

Seeking to eliminate the chances that come from the ignorance and deceit of our fellow citizens, we have made gigantic strides along the path of government control and supervision of utilities. The government stamp is demanded on our drugs, our foods, our doctors; and on how much more none may tell. But, with all our pains, we have not arrived—and we never shall arrive—at the point where we may dispense with personal care and discrimination. The rule of *caveat emptor* never will be abrogated.

In a publication sent out by a chemical manufacturing house, we read this significant item: "We reject annually many lots of defective and spurious aconite, employing only the *select* of the market." We are safe in asserting that every manufacturer, every wholesaler, jobber, retailer makes the same claim of select excellence for his products. But—what becomes of these rejected lots? Who gets them? Who shoulders their loss, destroys them, gets them out of the market? What is to hinder the owner who has been "stuck" with a bad lot of roots getting them powdered and selling them in this unrecognizable form?

Undoubtedly there are firms that prize their standing too highly to let any inferior goods go out of their places knowingly; but have they never a dishonest or careless employee? And are there no men in the drug trade who are not averse to buying a cheap job lot and selling it at a high profit, if they

can find the "sucker" to take it off their hands as good goods?

Bosh! And thrice again, bosh! There is no monopoly of honesty and efficiency in the drug trade; and there is nothing in dealing in drugs that purifies the human heart of wickedness or greed. Until the millennium dawns, the doctor must scrutinize his drugs himself and trust nobody else. He must know for himself; and he must learn to know which supply houses really try to keep up their quality, and which are in business for all they can make out of him.

Just what is meant when a house guarantees the quality and accuracy of its products?

There was a firm once that dealt in a certain article—the expressed juice of a berry. The concern charged the top price for it, gave the minimum quantity, and would not replace it when it had decomposed before the bottle had been opened. The house is out of business—at least we have not seen it among the advertisers for years. Did it make a fortune and quit, or was it dropped by a disgusted profession? Probably it died, because it was cheaper than living on free lunches.

As a rule we like the man who thinks it is going to clear up better than we do the one who is sure it has set in for a long rainy spell.—Nixon Waterman.

THE ACONITINE INDICATIONS

One of the most significant illustrations of the differences between the cruder drug preparations and their active principles is furnished by aconite. This drug is acknowledged to be one of the most powerful agents in the *materia medica*. Its powers are developed rapidly and, in lethal doses, it overcomes the vital principle with appalling force.

Aconite enjoys the advantage of having been studied with unusual care, and its field of activity has been determined with scientific accuracy. Moreover, the uses to which aconite has been put in practice are exactly covered by its principal alkaloid, aconitine. The other two active principles, aconine and napelline, exist in too small proportions and potencies to modify seriously the effects of the aconitine. There is not a use to which aconite has been put that is not fully supplied by the alkaloid.

I doubt if any plant drug presents a greater variability of strength in its galenic preparations. Examinations of many samples of aconite tincture—the most popular form—showed no two to be of nearly the same

strength, and the diversity to vary over a scale of more than 16 to 1. With ordinary drugs the physician may worry along with such uncertainties, trying out each new sample and, after its quality has been determined, administering it in doses sufficient to induce the desired effects.

This will not do with aconite; its toxic action is too powerful and too swiftly developed, while the febrile conditions in which its powers are most valuable require prompt and effective application in the earliest stages, before the pathologic processes have progressed to the infliction of material lesions.

For these reasons it is of prime importance that the preparation of monkshood to be employed should be so certain, uniform, and unchangeable that the clinician should know precisely how strong a dose he is giving.

Take an opening inflammation, in the stage of hyperemia; we have a very few hours in which to act, before the engorged capillaries give way, and extravasations occur. If in this time we succeed in relaxing the spasmodic contraction of the systemic capillaries and lessening the force of the heart in thrusting more blood into the affected area, the hyperemia subsides as the blood drains out, and the subsequent stages of the inflammation do not follow—the attack is jugulated. But if we must spend these precious moments trying to determine the strength of our drug, the opportunity is lost.

Naturally, the user of the tincture is apt to deny the possibility of aborting a febrile attack, while the doctor who is accustomed to aconitine knows jugulation is a possibility. Just so, the surgeon of the Civil War considered union of wounds by first intention so rare and unlikely as to be not worth trying for; and now we expect such unions, as a matter of course.

Another significant phenomenon: Every doctor who employs the tincture is somewhat afraid of aconite, and considers aconitine too dangerous for use as a medicine; while those who are accustomed to aconitine lose all fear of it, and even recommend it as especially suitable for children on account of its safety and mildness of action.

Take a granule containing 1-800 grain of aconitine, let it dissolve on the tongue, and in less than one minute the characteristic numbness will have developed. This quickness of action is a notable phenomenon with all vasorelaxants, the facilitation of the circulation carrying the drug rapidly through the vessels to the point where its activity is exerted. Quick action is needed for quick

affections. To acute maladies we oppose remedies speedy and powerful; to chronic diseases we apply agencies slowly developing their influence but, more enduring. The problem of removing debris, repairing damage and restoring healthy function is a very different one from dissipating at the outset a threatening hemic afflux.

The therapeutic applications of aconitine are innumerable, but they are all built upon its power of relaxing vascular tension and stimulating cardiac inhibition. Even the relief of painful affections like neuralgias depends upon this, for by dilating the cutaneous capillaries the blood is permitted to flow into them and the engorgement of the aching nerve centers is allayed.

The local anesthetic power of aconitine is not utilized, as we have less potent agents that fulfil that duty satisfactorily. However, this symptom is an invaluable indication of beginning toxic action, showing that the time has arrived to discontinue the remedy. Although to those who are accustomed to employ aconitine daily and hourly in practice, the drug is never dangerous, yet it is not to be applied carelessly. Here is where the admirable system of small and rapidly repeated doses comes in so aptly.

To a lady, aged 35, full-blooded and stout, we gave three granules of aconitine, veratrine and digitalin, at one dose. Shortly afterward she spoke of the characteristic aconite numbness, generally diffused over her body. No treatment whatever was required, but thereafter she was given these granules but one at a time, repeated every half-hour until the pulse showed relaxation. This lady seemed unusually susceptible to some drugs, for once before she was idodized by one five-drop dose of syrup of iodide of iron.

Withal, safety and efficiency are best secured by administering aconitine in small and repeated doses nicely gauged to induce the effect desired.

Thy friend has a friend, and thy friend's friend has a friend; be discreet.—The Talmud.

PROPHYLAXIS OF "COLDS"

In our enthusiasm over the biologic aspects of disease which have engrossed the attention of the profession during the last decade, we are perhaps prone to overlook too completely the other factors which unquestionably play an important part in the etiology and pathology of infectious conditions. Especially does this seem to be the case in

regard to those diseases in which the demonstration of the biologic factor has entirely revolutionized our theories and conception of their nature and cause; diseases which we had never suspected of having any infectious morbidity. By a sort of process of reaction, we have caught eagerly at the new explanation, to the utter ignoring of the old, forgetting that clinical facts, as I have pointed out in another editorial, are not to be overthrown by bacteriology, but only to be elucidated.

Thus in the matter of "colds," for example. For years we accepted, without question, the congestive theory of catching cold. It was generally conceded that the action of hot and cold air upon the vasomotor mechanism of the skin and mucous membranes brought about a disturbance of the circulatory balance which resulted in a catarrhal inflammation of these tissues, giving rise to rhinitis and other forms of catarrh. Then, all of a sudden, as it were, the microscope and the culture tube were held up to our astonished eyes, and we saw clearly, for the first time, that the pneumococcus, and the streptococcus, and the influenza bacillus, and the rest of the microbic family of the nose and mouth were at the bottom of the trouble.

In the glow of our new-found knowledge, we laughed a little foolishly at our former notions about taking cold, and then we went to the other extreme. Taking cold was not "taking" cold at all; it was acquiring an infection. Exposure to weather had no more to do with it than it had to do with getting the measles. All our fondly cherished precautions, directed to the care and protection of the skin and the nasal passages against temperature changes, were a delusion. The only adequate and effective prophylaxis lay in biologic immunity, through blood resistance and opsonic stimulation.

This side we ought to have considered, yet not have left the other side unconsidered. As a matter of fact, of course, the intervention of the bacteriological factor did not alter the validity of the vasomotor factor; for the role of the vasomotor mechanism in the production of the cold was an established, clinical fact; and, I repeat once again, bacteriology cannot and does not alter clinical facts. By all means let us replace the word "cold," and the morbid entity which it used to convey, by the word "infection," with all that the latter term implies. By all means let us recognize and avail ourselves of the other side which bacteriology has opened up to us. But, cold or infection or whatever it be, we cannot, and we should not, get away from

the clinical fact, established by years of occurrence and observation, that exposure to vasomotor disturbances does precipitate the disease.

Dr. John C. Rommel, in a communication to *The Medical World*, calls us back in timely fashion to this sensible viewpoint, and makes a strong plea for a more systematic play-up of the vasomotor element in the prophylaxis of colds. Nor does he stop at merely calling attention to the subject, but, like a good constructive critic, he propounds a practical method of applying the principle for which he contends. He urges a rational and systematic practice of "hardening" the skins of those persons who exhibit a special susceptibility to changes of temperature by means of treatment with cold water, cold air, and the wearing of lighter clothing, particularly the discarding of woolen underwear which, as he points out, irritates the skin and keeps it in a continued state of relaxation. All of which is trite enough, to be sure—nothing new about it; but it is none the less scientific, and well worth calling to our attention at this time.

There will be found in many cases, I fear, an unfortunate obstacle to the carrying out of Doctor Rommel's plan, namely, that the very people for whom such a hardening process is most needed are, as a rule, the people in whom it cannot be accomplished, who are inherently defective in vasomotor capacity and quite incapable of responding to stimulation. However, there is still a sufficient number of individuals in whom vasomotor deficiency is largely a matter of habit, and re-education quite practicable; and for these the system of treatment proposed by the doctor offers a scheme of immunization equally scientific and equally effective with those which look to the biologic defenses. This, after all, is the prime significance of Doctor Rommel's preaching.

THE HARRISON ANTINARCOTIC BILL

The federal antinarcotic bill, as finally revised by the Conference Committee, passed the United States Senate on December 10. It will undoubtedly be signed by President Wilson before this number of *CLINICAL MEDICINE* reaches its readers, and becomes effective upon March 1 next.

In the February number of *CLINICAL MEDICINE* we shall print a digest of the bill and give all information regarding its details necessary for the guidance of physicians and others interested.

P. S. The bill was signed by President Wilson on December 21, and is now a law.

Let kindle, as before, O Heavenly Light!
New messengers of righteousness, and hope,
And courage, for our day! So shall the world,
That ever, surely, climbs to thy desire,
Grow swifter toward thy purpose and intent.

—Richard Watson Gilder.

CONCERNING DUM-DUMS

In times of war it does not take very much to stir up between the belligerent peoples (especially among those who do not take an active part in the fighting but rather stay at home and feed their nerves with sensational "news" from the front), charges and counter-charges of atrocities and violations of the civilized code. Not infrequently this susceptibility to sensationalism on the part of the non-combatants is deliberately played upon by the powers that be for the purpose of arousing sentiment in favor of one belligerent at the expense of another.

Thus it is not at all surprising that between the nations now at war in Europe there should have appeared that perennial subject of accusation and reproach, the dum-dum bullet, tabooed several years ago as an agent of modern warfare, and stalking, like Bancho's ghost, at every subsequent orgy of steel and powder. It is still less surprising that the dum-dum agitation should be encouraged and fomented among those of the belligerent peoples who, as we have said, feed their passions on just such sensational rumors.

But by us, as a neutral, disinterested people, and especially by those of us who purport to be dispassionate scientists, such reports ought to be received and swallowed with a grain of salt, particularly when we consider the lack of any specific evidence in the case and the wide latitude of facts concerning bullet wounds in general and dum-dum wounds in particular. Most of the erroneous impressions which prevail on the subject in this country are due to a misunderstanding, or a lack of knowledge, as to just what a dum-dum bullet really is.

"The dum-dum bullet," says Surgeon-General W. F. Stevenson of the British Army in *The British Medical Journal*, "is precisely similar to the Lee-Enfield bullet, except that the copper-nickel envelope ends near the shoulder about three-eighths of an inch from the point, leaving the leaden core exposed for that distance. Other forms of this class of missile have a hollow, or dimple, in

the fore-end, which is uncovered by the envelope, or cross-cuts made with a saw in the direction of the long axis of the bullet; but in all of them the same object is sought, namely, that they should break up on contact with, or at least on striking, bone."

From this description, it will be seen that there is nothing so definitely distinctive about a dum-dum bullet that it cannot be very easily simulated by an ordinary service bullet in its effect and in its appearance after it has spent itself, and, as the Surgeon-General says, "the mere finding of bullets broken into numerous fragments in wounds is no proof that the dum-dum type of missile is being used by the enemy, for the ordinary service bullet sometimes parts with its envelope which may be torn into jagged and twisted strips of metal, while the leaden core is broken into slug-like pieces, with the result that the destructive effect on the soft parts of the limbs is greatly increased."

The only real evidence of the use of the dum-dum is the finding of bullets of this kind in positions recently evacuated by the enemy, and even then, as will be seen from the description given by the writer, it is not at all impossible that ordinary service bullets have been treated by the men themselves so as to resemble the dum-dum type.

As to the evidence of the wounds made by such bullets, the British Surgeon-General very pertinently points out that "ordinary service bullets are capable of causing more severe wounds in the limbs when they traverse compact bones at high rates of velocity." The jagged and shattered nature of the wound is in all cases due to the so-called explosive effect of the bullet; and it is quite a mistake to imagine that this explosive action is confined to dum-dum bullets. Our own Colonel Lagarde, in his excellent and authoritative work on "Gunshot Wounds," speaks instructively on this point.

"The term 'explosive effects,' he says, "is in a measure misleading, because it conveys the impression that the wound is the result of an explosion or an explosive bullet. The term is entirely descriptive, and owes its origin to the similarity in the appearance of a wound caused by an explosive ball, *per se*, as compared to a bullet having sufficient velocity and energy to show a corresponding lesion when a proper impact is made, as for instance against resistant bone. As a rule, the entrance wound presents no special features. The exit wound is large and lacerated, with the appearance of an explosion having occurred from within. Torn muscles,

tendons, and at times lacerated nerves, project from the injured part, mingled with pieces of bone. The channel from the wound of exit is funnel-shaped, with the base at the exit and the apex at the seat of fracture."

It is clear, therefore, that neither the appearance of the bullets found in the wounds, nor the character of the wounds, themselves, furnish any trustworthy evidence of the use of dum-dum bullets, nor even of the use of bullets resembling the dum-dum type. And even the discovery, here and there, of unused bullets of the dum-dum type does not by any means conclusively point to the systematic use of the dum-dum, since, as we have pointed out, the features of the dum-dum are easily imitated in the ordinary service bullet. A dispassionate and disinterested view of the matter should lead us to the very sane and sensible conclusion reached by the British Surgeon-General himself, namely, that "the recognized customs of war and all ideas of humanity are against the deliberate use of projectiles of this kind among civilized nations, and it is improbable that they are being used to any great extent."

If I stoop

Into a tremendous sea of cloud,
It is but for a time; I press God's lamp
Close to my breast; its splendor, soon or late,
Will pierce the gloom; I shall emerge one day.

—Robert Browning.

WE WANT YOUR OPINION—THIS IS IMPORTANT

For some time, pharmaceutical journals and pharmaceutical societies have been advocating the enactment of laws requiring every physician who dispenses his own medicine to hand to his patients prescriptions for the drugs dispensed. The reason given for advocating such legislation is the possibility of danger to the patient through the carelessness or ignorance of the attending physician. The underlying reason, however, is undoubtedly the desire on the part of the druggist to strike a body blow at dispensing by doctors.

During the present winter, forty-four state legislatures are or will be in session. It is probable that numerous bills will be introduced, affecting the interests of the medical profession, and we have good reason to believe that among them will be many of the character described above. In order to get an expression of opinion from the medical profession as to how they would view such anti-dispensing legislation, it has been suggested

to us by a very prominent pharmacist that we should conduct a symposium upon this subject. We therefore ask herewith every reader of *CLINICAL MEDICINE* to write us briefly for publication his attitude regarding a law which would require every physician dispensing medicine in person, to write a prescription for this medicine, such prescription to be placed in the hands of his patient.

This is an exceedingly important matter, and we hope that a great many physicians will write us. We want to know exactly how the members of the medical profession feel. It will be understood, of course, that such a law would affect those who ordinarily prescribe as well as those who habitually dispense, since practically every physician dispenses more or less of the emergency remedies, such as morphine, atropine, cocaine, strychnine, digitalis, chloral, acetanilid, and other powerful drugs, against whose perils our druggist friends allege their desire to protect the people of this country. Please write us promptly and write us frankly. We want to hear from all sides.

Come right to the point. Present your case, plead your cause, and do it quickly. Better ten short, pointed, practical articles than one long and attenuated one in which the moral or the helpfulness is lost in a maze of words.

KEEP AN EYE ON THE LEGISLATURE

Most physicians in active practice allow themselves to become absorbed in their work. The momentous problems of life and death with which they are concerned are so stupendous that they concentrate upon them every particle of brain power they possess; and they grow impatient at being called upon to give attention to anything else.

Truly, there is nothing so fascinating, nothing so much worth while as this duty of tracing the paths of disease and of opposing to it a satisfactory treatment. No matter how gigantic a man's intellect, even the doctor's, he may well believe that all his gray matter is needed to do his professional work justice.

Distracting him from his engrossing duties, comes the call of his family for means—for "dollars." Wife and children get to represent to him so many hands stretched out to be filled. No nestful of young birdlings ever presented a finer display of eternally open, gaping mouths than is shown by the doctor's family. Poor things! How can they realize that Johnny's boots or Bertha's graduating

gown seem of little moment to the father, who is striving desperately to keep the breath of life in little patients, stricken with diphtheria, scarlet-fever, typhoid fever or pneumonia—to the man whose brain is drained of vitality by attendance upon maternity cases, and whose rarely indulged night in bed is disturbed by demands to relieve asthma or to struggle with croup?

Yes, papa will try to collect the needed sum; and he even makes out a list of debtors to whom he will apply on the morrow. But just as he is starting out comes a messenger to tell of a man crushed by a falling tree—and collections go over indefinitely.

Fill the bottle with pebbles—the doctor's work—and it is full. Filter into the inter-spaces sand—collecting—and, yet, the bottle is only full. Room still for water—but where does the doctor's day show leisure for attention to medical politics, society meetings, and time to be given to the legislation that threatens to tie up his means of livelihood through restrictions and regulations that hamper him unreasonably?

The prime difficulty is, that our work is one that does not admit of business methods, either in finance or in the domain of thought. We can not toss a letter to the stenographer and say, "Tell him, No!" We must carry our problems about with us, slowly cogitating them, and take time to search through books, notes, and journals; gradually formulating our conceptions, but none the less ready to desert them and adopt others as the case develops. We are likely to have quite a number of these problems under solution at the same time, and each of them changes and shifts from day to day.

Each of us is like a general beset with enemies, every one of whom is doing something different each day. Some may advance over night, others retreat—while as to some we do not know where they are or what they are about—we must forever surmise, infer, foresee, depend upon intuition or just plain guess.

Well, it's lucky for us that we have journals to keep a sharp eye on the legislatures and to warn us of every snaky move and sly proposition brought up, designed to hem us in and to filch our few privileges and our lean purses. As long as our true medical journals warn us we can put in a word or a letter that will enlighten our well-meaning but not omniscient representatives, and thus prevent the affair going by default. But does not that make it all the more imperative that the doctor should back up his loyal journals actively in the fight? Unless the general practitioner

does this, unless he does give the friendly press his enthusiastic support, our enemies surely will win out while we—*shall be out!*

Tell a miser he's rich, and a 'woman she's old, and you'll get no money of one nor kindness of t'other.

—Benjamin Franklin.

AS TO MORAL DETERIORATION OF DOCTORS

There is entirely too much talk of the medical profession's moral deterioration. We hear of surgeons operating upon their confiding patients solely that the cutter may collect big fees for needless work; of the family physician devising such interferences and pocketing half the surgeon's fees; and of spinning out maladies, that the number of visits may be increased. Darker stories are hinted—of deliberate infection of the bladder, to start a lifelong cystitis to be treated, for instance, and similar "over-true tales."

Most of these allegations are lies. Many originate as intended jokes, and the perpetrators never expect to be taken seriously. These are like the "jokes" put out by a Scandinavian wag, anent the cabbage-worm and the artificial honeycomb—stories which the originator looked on as jokes, but which proved disastrous to two flourishing industries and brought incalculable losses on many innocent persons.

Although there may really have occurred an occasional rascality like those mentioned, it can not have been more than exceptional at the worst. At the best, the heart of the profession is sound; and, as a body, physicians deserve all the confidence they have ever received from the people. That we do not hear of their good deeds, is because they are taken as a matter of course—and we do not go about the streets with brass-bands, crying our merits like hucksters. Still, sometimes an instance crops up that deserves to be recognized and made public. Here is one out of many:

Bennett Medical College (Chicago) was requested to investigate the merits of the Duket cure for tuberculosis. The cure was backed by powerful influences and money. A hospital with fifty beds was purchased, a laboratory established and generously fitted, a staff chosen from the faculty and placed on liberal salaries, and a clinic opened. Financial support without limit was tendered, and the college was requested to investigate the cure scientifically and report upon its merits. If it proved a cure for the dread disease,

from which every household in the land has to mourn a victim, the world would be indebted to the college and its backers. If the Duket cure did not prove worthy, the investigation was to be extended to the Friedmann method or any other that appeared sufficiently plausible to warrant the test.

Powerful influences backed Duket; the material advantages of the endowment to the college were great; and there was every reason (speaking from the standpoint of the material interests of the institution) why it should favor the cure or find excuses to continue the work. But after a very thorough investigation the college found the Duket cure worthless, and neither the Friedmann nor any other method in sight sufficiently well grounded to merit investigation.

The laboratory and clinical staff told the truth, and so cut off its own lucrative income thereby. Yet, should this statement see the light, we are quite sure that, instead of being pleased with the laurels we proffer, these gentlemen will be inclined to be affronted that anybody should have suggested the possibility of their doing aught else. And, since in this we heartily agree with them and firmly believe that more than ninety-five percent of the medical profession would have done exactly the same thing, we tender our apologies.

Graft is news; honesty is an old story.

THE "TWILIGHT SLEEP" AGAIN

The matter of the twilight sleep appears to be passing into another stage in this country, as a result of the recent agitation on the subject—the stage of adoption. Several of the hospitals of the larger cities, notably those of New York, are making use of it in their obstetrical work. Bellevue Hospital is trying it out in their lying-in wards. But the most systematic and adequate follow-up of the method has been made by the Jewish Maternity Hospital of New York. (Rather remarkable, but altogether creditable to their breadth of mind, that the Jewish race should be most active in cancelling the Judaic curse upon the bringing forth of children.) In this institution the twilight sleep has been subjected to a careful experimentation and a rigid observation for a period of three months, the result of which has been to convince the board of the validity of the claims made for it.

The cases experimented upon by the Jewish Maternity Hospital were taken from all classes of patients. The report shows that

there have been no complications and no untoward symptoms in any case, and that the percentages of cases in which it was found necessary to resort to artificial aid in delivery was much lower among those who took the twilight sleep than among those who did not. The experience of the Jewish hospital also shows, as we have over and over again pointed out, that success in the method is dependent upon careful attention to technic, the principal danger being again demonstrated to be the possibility of excessive doses of morphine.

We feel gratified, of course, at this evidence of the growing adoption of hyoscine and morphine anesthesia in the high places of medicine. We have reason to be gratified; for we take credit to ourselves for having actively introduced this method in this country, and promoted its use in the face of unaccountable opposition. We welcome its employment by hospitals everywhere; but we cannot refrain from repeating once more, as we have repeated over and over before, that there is no reason for confining its use to these institutions. There is, in fact, no reason in the world why the physician, with the same care and attention to detail, cannot give the twilight sleep successfully in the homes of his patients; on the contrary, as there are countless reasons why it is not convenient or desirable for every woman to go to a hospital for her confinement, there are just that many reasons in favor of the home administration of the twilight sleep.

The pessimist who goes about wishing he had never been born is not the only one who regrets it.

—Nixon Waterman.

IS EMETINE OF VALUE IN ARTHRITIS?

There seems to me nothing in drugdom that has been more fascinating than the development of emetine therapy during the last two years. We know now that this drug is specific in dysentery, more than probably specific in pyorrhea, and remarkably effective in controlling hemorrhage of varied type. Now comes still another suggestion for its application.

In a recent number of *The Journal of the American Medical Association*, Smith, Middleton, and Barrett announce the discovery of the *entamoeba luccalis* (the organism causing pyorrhea) in the tonsillar crypts of a number of persons affected with chronic tonsillitis, associated with arthritic and other systemic complications. In at least two of these cases

the emetine was administered hypodermatically, as in the treatment of pyorrhea. As a consequence, there was an immediate and striking amelioration of the rheumatic symptoms.

The question instantly arises as to whether it may not be possible to cure, or at least greatly to relieve, many of the chronic forms of arthritis now known to depend upon mouth infection. Even arthritis deformans may, possibly, be benefited by the administration of this alkaloid. Certainly we shall try this remedy in the very next case of arthritis, acute or chronic, coming to our attention, in which an examination of the mouth shows the presence either of pyorrhea or of chronic tonsillar disease. We hope that many other physicians will also try the remedy in cases of this kind, and let us know whether benefit follows its use or not.

It is all very well to be constantly seeking to add to your store of knowledge—to do this is a sign of good judgment and foresight; but it is of even greater importance to impart to others what you have learned—for this is a duty.

DR. ROBERT GRAY'S AUTOBIOGRAPHY

We have just received from Dr. Robert Gray, of Pichualco, Mexico—a man who is known to every one of the older readers of *CLINICAL MEDICINE*, and beloved by all—the manuscript of his autobiography. A portion of this, at least, will be published in this journal, beginning next month; while we hope to see, eventually, the complete autobiography in book form.

The record of Doctor Gray's life is one of the most interesting and remarkable we have ever seen. He was born in the southern portion of the United States, spent his boyhood on a large plantation in a slave-holding community, went to Paris for his medical education when he was a youth of twenty-one, served as a soldier and surgeon in the Confederate army during our Civil War, and soon after the close of the war went to reside in Mexico; and here, buried in the tropical forests of the Isthmus of Tehuantepec, remote from railroads, cities, and intimate association with his fellow countrymen, he has been practicing his profession ever since.

In spite of this prolonged and complete isolation, Doctor Gray has exerted a marked influence upon medical practice in the United States no less than in Mexico. Now, at the advanced age of eighty-five, his mind is as active as ever and his body apparently more

resistant to fatigue than that of many a man of fifty years. He attends to a large practice, extending over an area measuring 40 miles from one end to the other, making his visits on the back of a horse or a mule. Even now he is likely to being called out, as he recently wrote me, "at any hour in the twenty-four."

Doctor Gray's life has been, and is even now, a romance. Told in his quaint yet virile style, it makes a story far more fascinating than many a work of fiction. You will want to read it all.

And so, if I have wrought,
 Amassed, or conceived aught
 Of beauty, or intelligence, or power,
 It is not mine to hoard;
 It stands there to afford
 Its generous service, simply, as a flower.
 —Bliss Carmen.

WE SHOULD USE MORE LOBELINE

The other day I had a most interesting interview with that good friend of every reader of *CLINICAL MEDICINE*, Dr. Finley Ellingwood. He dropped in to see me, and in the course of our talk he launched forthwith into most enthusiastic praise of that well-known but neglected vegetable remedy lobelia.

Doctor Ellingwood considers lobelia one of the most remarkable remedies in the materia medica, and he asked me point-blank why we did not have more to say in the columns of the *CLINIC* about lobeline sulphate. He not only considers lobelia (also lobeline) a powerful and safe antispasmodic, but really a "vegetable antitoxin"—a designation applied to it some years ago by Dr. E. Jentzsch of this city.

This carries us back to 1908. In that year Doctor Jentzsch read before the Illinois Eclectic Medical Association a paper upon the use of lobelia in the treatment of diphtheria, which was published in this journal.

His first experience was with his own child, who apparently was dying from diphtheria despite liberal dosage with antitoxin. As a last resort the doctor gave a hypodermic injection of lobelia, and improvement followed almost immediately. He subsequently employed this drug in many cases, and at the present time is more enthusiastic about it than ever. Doctor Jentzsch declares that "its favorable action takes place usually within ten minutes"; also that it is something more than a relaxant, or, in other words, that it has a specific action upon the course of the

disease, acting veritably as a "vegetable antitoxin."

Doctor Ellingwood assures us that Doctor Jentzsch's experience has been verified by hundreds of other practitioners. He has received numerous letters from physicians who are just as enthusiastic in the praise of lobelia as is Doctor Jentzsch himself.

In July 1912, we published a letter from Dr. John H. Ferguson, of Colorado Springs, Colorado, who had become interested in lobelia through reading the articles of Doctor Jentzsch. Finding the fluid preparations of lobelia very painful when injected subcutaneously, he began the use of lobeline sulphate, and he declares that this "gives all the good effects which Doctor Jentzsch attributes to the 'specific' tincture." There is no doubt that the peculiar action of lobelia depends upon the constituent lobeline. Indeed, Doctor Ellingwood informs us that the first pharmacologic studies of lobelia were made with one of the salts of this alkaloid.

But to return to Doctor Ferguson. In the letter already referred to, he reports the treatment of 18 cases of pneumonia, in which lobeline sulphate was administered, with very gratifying results. All his patients recovered, although several of them were children, one being only ten weeks old.

Doctor Ellingwood, in discussing with us Ferguson's experience, expressed wonder that more physicians do not try lobeline sulphate in pneumonia. In this disease, he believes, it should be constantly employed. Of course, it should not be made to replace the deferrescent alkaloids; but, as supplementary to these drugs, it seems to be clearly indicated, at least in a very large percentage of the cases. Wherever a relaxant is called for—wherever there is spasm from almost any cause—there lobeline should be given a faithful trial.

Speaking of lobelia, Doctor Ellingwood, in his "Materia Medica," says: "It is specific in threatened spasm, with exalted nerve action—a high degree of nerve tension with great restlessness and excitability, flushed face and contracted pupils." For instance, lobelia (also, lobeline) has been demonstrated to be of great value in the treatment of asthma, especially in the spasmodic type. In cardiac asthma, it probably would not be indicated. Ringer says that in whooping-cough lobelia "is useful in the spasmodic stage and in two or three days generally reduces by one-half the frequency of the attacks, lessening their severity at the same time." He also praises it in the treatment of croup and laryngismus

stridulus. Ellingwood says that it has been exceedingly popular as a relaxant in rigid os uteri. In this condition, it might be tried alone or in combination with caulophylloid.

Similarly, lobeline is also worth trying (given hypodermatically) in the treatment of hepatic colic, in association with other relaxants, such as atropine and glonoin, although in severe colics of this character resort to more powerful anodynes probably will be necessary.

Do not get the impression from anything we have written that lobeline sulphate or any other lobelia preparation should be employed to replace antitoxin in the treatment of diphtheria. No matter how enthusiastic our Eclectic friends may be in its praise, nothing should take the place of the diphtheria antitoxin in this disease. Yet, in severe cases—yes, in all cases—it may well be given to supplement the specific treatment.

Lobeline certainly ought to be employed much more generally in the treatment of pneumonia as well as in numerous other spasmodic affections to which we have referred—whooping-cough, for instance, in which, in association with calcium sulphide, it ought to provide an almost ideal method of treatment. It might well be given in connection with other agents in the treatment of croup from whatever cause; indeed, the resourceful physician will find many, very many occasions to resort to this important remedy, which, as we have already stated, Doctor Ellingwood considers one of the most important of the *materia medica*.

We hope that those of our readers who have been prescribing lobeline will report some of their cases through the columns of *CLINICAL MEDICINE*. We also hope that those who have not done so will give the remedy a careful trial and let us know how they like it.

Rumor is a pipe
Blown by surmises, jealousies, conjectures,
And of so easy and so plain a stop,
That the blunt monster with uncounted heads,
The still discordant, wavering Multitude,
Can play upon it.

—William Shakespeare.

THE TRIUMPHS OF MEDICINE AND SURGERY

The writer of a very clever editorial on "The Use of Drugs and the Science of Medicine" in a recent number of the *Cincinnati Lancet-Clinic* finishes his communication by asking whether we are not justified in ex-

pecting that the next fifty years will accord us triumphs in internal medicine as splendid as those of surgery during the last half century.

I venture to say that the triumphs of surgery, great as they are, are overrated if they are lauded to the disadvantage of those of internal medicine, and I assert that the latter has made quite as great progress, has recorded fully as great triumphs during the last thirty or forty years, as surgical science has.

While the advances of surgery date on the one hand from the application of anesthetics for the purpose of rendering operative interference painless, and on the other from the researches of Lister, which eventually assured aseptic technic and eliminated all the horrors of wound infection, will it be wrong to point out that surgery owes both discoveries to workers in the field of internal medicine?

Granted that the triumphs of surgery are spectacular, and almost stunning in their greatness and still more in their possibilities of the future, do not let us lose sight of the fact that the triumphs of internal medicine have made it possible for the physician to make a diagnosis of diphtheria with equanimity, conscious that he can carry his patient safely through the attack in the great majority of cases; remember also, that the incidence and the dangers of typhoid fever have diminished to a degree that was not dreamed of even twenty-five years ago; remember that internists may take the credit for having made the Isthmus of Panama habitable; that they conquered yellow fever, malaria, and syphilis, and have reduced the frequency of active tuberculosis.

To internists are due a host of achievements of benefit to thousands, where, comparatively, surgery can only benefit perhaps tens of individuals.

Let us cease worshipping at the shrine of surgery if by so doing we must decry her greater sister, medicine. I would not be misunderstood as wishing to detract from the triumphs of surgery, but I protest against this apotheosis carrying with it a comparison to the disadvantage of internal medicine, which has made greater progress in the past and is rushing onward to still greater things in the future.

Also, I believe fully that medicine is on the threshold of greater achievements than any heretofore recorded; also that there is to be a great awakening in medicinal therapy. Think of emetine!



ENEMIES ON THE FIRING LINE, BUT FRIENDS WITH THE WOUNDED

This picture was taken in the Reserve Hospital in Berlin. The patients are wounded French prisoners. A German and a French surgeon are standing together by the patient's bed, the former being the chief surgeon, the latter a prisoner, but still at his post.

The Medical Man in the Great War

WE are publishing herewith a few pictures illustrating the work of medical men in the Great War. Few of us realize how colossal are the tasks which our European brethren have been called upon to undertake. For instance, a rough computation of the number of killed, wounded, and prisoners, based upon the published reports, official and unofficial, would seem to indicate that the losses of all the armies engaged in this war must already aggregate close to 6,000,000 men.

If this computation is fairly accurate, then somewhere between 2,000,000 and 3,000,000 men must have been wounded. While the mortality in the base hospitals is very small, probably not more than 2 or 3 percent, the percentage of deaths among the wounded at the front and in the field hospitals is undoubtedly very large. (See the letter from a British medical officer printed elsewhere in this number—Miscel-

laneous Department.) Imagine, if you can, the immensity of the task placed upon the military surgeons and the Red Cross workers. Not only must every hospital of the warring nations be taxed to its uttermost capacity, but thousands of homes and public buildings must be used—as we know they are being used—for the care of the wounded.

The pictures shown on this and succeeding pages demonstrate the efficiency with which European physicians and nurses have risen to meet the emergency, and with what skill, conscience, and humanity they are alleviating the sufferings and restoring to life and duty the thousands who have already fallen on the bloody "fields of honor."

American physicians will sympathize deeply with their brethren in Europe. Where it is proper to do so we should give substantial assistance. Our own Red-Cross service is doing great work and deserves our generous support.



A BRITISH HINDU SOLDIER AT A FRENCH FIELD HOSPITAL

This picture shows how wounds are dressed at the field hospitals for the first time, in the open air. As soon as possible the wounded are sent to the rear to receive such additional care as the character of their wounds may require. This man will be able to walk.



A SCENE IN A HOSPITAL TRAIN IN BELGIUM

These wounded Belgian soldiers are being taken to Antwerp for hospital care. Hospital cars, carefully fitted up for the comfortable transportation of the wounded, are being employed by all the combatants. Especially arranged motor ambulances are also much used.



PRESIDENT POINCARE VISITS THE AMERICAN HOSPITAL

This beautiful building is the American Hospital in Paris which has been opened for the care of wounded soldiers. President Poincaré has just doffed his hat in acknowledgement of the cheers of the people. Ambassador Herrick is behind him, holding his hat in his hand.



GERMANS CARE FOR WOUNDED FRENCHMEN IN BERLIN

This picture gives a faint idea of the large scale on which it is necessary to care for the wounded. It also shows that the French prisoners are well taken care of. As a rule, at least, wounded soldiers receive identical care everywhere, irrespective of nationality.



THE LEGION OF FRONTIERSMEN CARES FOR BELGIAN WOUNDED

This organization is doing splendid work among the wounded in Belgium. The picture was taken, we believe, at Ostend, before that city was captured by the Germans. The great Kursaal was turned into a hospital, like so many other public and private buildings in Europe.



WOUNDED ENGLISH SOLDIER AT THE WOLVERHAMPTON HOSPITAL

Private Russell is fortunate indeed! Judging from the smile on his face and the arch glance of his nurse it isn't a half bad thing to be wounded. There are compensations even in heroism! This picture should be widely circulated in England—to encourage enlistment.

Leading Articles

The Practice of Medicine in Panama

By BENJAMIN H. FRAYSER, Ph. G., M. D., Panama City, R. P.

The Panama Canal Service; First Lieutenant, Medical Reserve Corps, United States Army.

THE organization of the sanitary department of the Isthmian Canal Commission under Surgeon-General William C. Gorgas, as Chief Sanitary Officer, the noble work done by him and his associates, and the continuation of this work by Colonel Charles F. Mason as Chief Health Officer of the Panama Canal will, I am sure, interest those of you who have failed to visit the Canal Zone. The plan of organization is complete in every detail. The Chief Health Officer and Inspector have full charge of the medical and sanitary work, with the coöperation of the superintendents of hospitals, chiefs of clinic, district physicians and sanitary inspectors. The cities of Colon and Panama each has officers of the Medical Corps of the United States Army detailed as health officers, and in these cities a corps of quarantine officers is constantly on duty.

The Isthmian Canal Commission established hospitals at Ancon and Colon, and a sanitarium on the Island of Taboga. A leper asylum also has been established on the mainland, several miles from Ancon. The two hospitals first mentioned are divided into clinics, each presided over by a chief, and directly under each chief are the physicians having charge of sections and wards.

The Ancon Hospital

Ancon Hospital is on the Pacific side of the Zone and is beautifully situated on the northern side of Ancon Hill, which rises nearly seven hundred feet above the City of Panama. We find here thirty-six wards, the residence of the superintendent, operating pavilion, library, x-ray department, Board of Health laboratory, Superintendent's office, medical storehouse, Catholic and Protestant chapels, and the residences of the physicians and hospital employees. About one-half mile from the

center of the grounds is located the insane asylum, which has three hundred inmates. In an emergency, 1 500 patients can be taken care of in Ancon Hospital.

Many of the buildings now standing were built by the French and their plan of architecture has been followed in other buildings erected on the hospital grounds since the American occupation. Each building rests on cement pillars, over two feet from the ground; is roofed with tiles and screened with copper netting. The wards are large and airy and usually contain about forty beds each. Several wards are in charge of a section physician who is assisted by the ward physicians, a section nurse and ward nurses.

The Board of Health Laboratory has as its chief Dr. Samuel Darling, whose original research work is well known to those of you who are interested in tropical medicine. Doctor Darling's staff is composed of a pathologist, bacteriologist, two chemists and four assistants. The routine stool, urine and blood examinations are made in the ward laboratories but all other laboratory work is done in the Board of Health laboratory.

The chief of the surgical clinic has full charge of the surgical department, with eight assistant surgeons, who, under his direction, operate, assist, and give anesthetics. The isolation and tuberculous wards are under the department of medicine. Each department has an officer of the week who is directly responsible for all the emergency cases admitted and for all ward calls when a ward physician is absent. One physician in each department is detailed as officer to be on constant duty for one week.

Colon Hospital and Leper Asylum

Colon Hospital is situated on the beach at Colon. This hospital is now used for emergency cases only. For a number of years the Isthmian Canal Commission operated a

*Permission to read this paper by title before the Knoxville Medical Society has been granted by Colonel Chas. F. Mason, M. C., United States Army, Chief Health Officer of the Panama Canal.



ENTRANCE TO ANCON HOSPITAL GROUNDS
Superintendent's residence second on the left

sanitarium on Taboga Island, about 15 miles from Panama City. Here, convalescent white patients were sent for one week to recuperate. While in the hospital, and at the sanitarium, patients receive free treatment and full pay, provided their stay is not more than thirty days.

Palo Seco Leper Asylum is on the mainland about twelve miles from Ancon. Its staff is composed of a superintendent, one American nurse and 14 attendants. At present four white and forty-one black lepers remain in this institution.

Every town on the Canal Zone has its district physician and sanitary inspector. The district physician has charge of the dispensary, where free treatment is given to all employes and their families; he makes all necessary calls and inspects the local hotel and commissary. In the larger towns on the Zone he has under him an assistant physician and a pharmacist. Twice daily, a hospital car is attached to the passenger trains of the Panama Railway and this runs across the Isthmus, taking to the hospital all patients who have been sent in by the different district physicians. This model hospital car is in charge of a male nurse and a negro orderly.

Nearly every nation is represented on the Isthmus by an employe, but the West Indies furnish the largest number of workmen.

Only a few physicians of the hospital staff speak Spanish, it being necessary to use this language only in the Spanish sections. The patients from the West Indies are usually very ignorant, consequently accurate histories are hard to take. For instance I will give part of a conversation between a Barbadian negro and a ward physician:

"Well, what is your name? Have you got a name?"

"Yessir, I got one."

"Well, what is it?"

"George Black, sir."

"Where do you live?"

"Yessir, I think so."

"Well, where do you live; in Empire or Culebra, or where?"

"Not there, sir."

"Well, where?"

"In Jamaica, sir."

"No. Now here, where do you live on the Isthmus. Where do you get your mail?"

"Who, me?"

"Yes, you. I'm talking to you. Do you ever get any mail?"

"No, sir."

"Well, then where do you sleep?"

"I sleep at Corozal, sir."

"How old are you?"

"Yessir, about that, sir."

"When were you born?"

"I dunno, sir."

"Are you married?"
 "Yessir, yessir, I'm married, sir."
 "How many children have you?"
 "Not too many, sir."
 "Have you got more than one?"
 "Yessir, yessir."
 "Have you got twenty children?"
 "No, sir, I think not, sir."
 "Well, how many have you?"
 "Not too many, sir."
 "What is your wife's name?"
 "Mrs. Black, sir."
 "Well, I know that, but what is her other name, what do you call her?"
 "My wife, sir."
 "Where do you live in Jamaica?"
 "In the interior, sir."
 "Well, what town?"
 "No town, sir."
 "Do you live in the woods?"
 "Yessir, dat's it, dat's de place."
 "How were you injured?"
 "I dunno, sir, but all at once there was a big boom, sir."
 "A big boom. Well, then what?"
 "I dunno, sir."
 "Where were you injured?"
 "I was standing up, sir, with a pick in my hand, sir."
 "Well, where?"
 "On the ground, sir."
 "Well, where did you get hurt?"
 "On my back side, sir; on the middle of my body, sir."
 "Now here, I want you to tell me where you got hurt. Where were you working?"
 "At Miraflores, sir."
 "Did anyone see you get hurt?"
 "Yessir, a colored gentleman seen me."
 "Who was he? What was his name?"
 "I dunno, sir."
 "Who is your boss?"
 "I dunno his name, sir, but he's a good man, sir."
 "Sign your name to this."
 "Who, me, sir?"
 "Yes, you, write your name here."
 "I can't write it, sir."

The "Black" and "White" signs are never displayed in stations or railway cars on the Canal Zone. Signs labeled "Silver Employees" and "Gold Employees" are familiar. Europeans and negroes are on the silver roll and are paid in Panamanian silver, while the Americans are on the gold roll and are paid in United States gold currency. Special waiting rooms and cars are provided for these two classes, consequently there is little friction.

In Panama the quartan type is rarely found, but estivoautumnal and tertian types are frequent. The cerebral form of malaria is encountered here and is fatal unless it is recognized and treated *promptly* with large quantities of quinine given intravenously or intramuscularly. In this type of the disease we usually give intravenously 22 1-2 grains of quinine, in 500 Cc. of salt solution, or the same dose, diluted 1 to 20, injected into the muscles, preferably those of the gluteal region. Repeat the dose in five hours. If this treatment is delayed until the parasites have matured, or if a double infection occurs, the prognosis is extremely grave. Over 60 per cent of the deaths from malaria are due to relapse.

Dr. W. M. James, of our hospital, has found that relapses frequently follow so-called spontaneous cure, and infections treated with small doses of quinine will usually relapse.

The routine treatment of mild malarial infections is 20 grains of quinine in solution, given on admission, and 15 grains three times a day thereafter.



Royal Palms at Hospital Santo Tomas

In 1911, Doctors Deeks and James reported to the Isthmian Canal Commission their observations in 230 cases of that severe complication which is met with especially in the estivoautumnal type of malaria, e. g., hemaglobinuric fever. Exciting factors are a lowering of body resistance, and the administration of quinine seems to predispose. The treatment used at Ancon Hospital is as follows: Milk diet; normal salt solution by rectum; hot moist applications over the stomach and loins; calomel, followed by mag-

dysentery. He has also called attention to the following forms of dysentery encountered in Ancon Hospital. Amebic dysentery, caused by the *entamoeba histolytica* of Schaundinn; amebic dysentery, caused by the *entamoeba tetragina* of Viereck; bacillary dysentery; bilharzial and malarial dysenteries; dysentery due to tubercular ulceration of the intestine; nephritic dysentery; diphtheritic colitis; dysentery in the course of pellagra; and several other forms, including "clinical" dysentery, which has no determined etiological factor.

The form due to infection with *entamoeba histolytica* is more frequently encountered here. Deeks has employed the bismuth-milk-saline method of treatment with great success in this form of dysentery. The treatment is carried out as follows: Upon admission, the patient is given a dose of castor oil. He is then put in bed and a heaping teaspoonful of bismuth subnitrate (about 180 grains), suspended in 4 ounces of water, is administered. This dose is repeated every four hours until the stools are formed and the tongue becomes clean, when one teaspoonful is given three times daily. All through the treatment an absolute milk diet is adhered to. Plain fruit-juices may also be allowed. Saline irrigations of the lower bowel are resorted to twice daily.

We have been using emetine hydrochloride with great success. The first day the patient is given 1-3 grain every four hours; on the second day, 2-3 grain thrice daily, and, on the third, 1 grain, t. i. d. I do not hesitate to increase this quantity when I think that greater benefit will be derived from a larger dose. After all symptoms have cleared up the patient is given one ounce of castor oil. The normal diet is gradually resumed and he is allowed to get up as soon as it seems safe to do so. In extreme cases, a wide-open cecostomy has been performed, and this enables us to give free irrigation to the large intestine, while it admits of a more generous diet.

During the year 1911, 22,275 patients were admitted to Ancon Hospital; and of this number 21 had amebic dysentery, were treated, and all discharged well—able to work.

Six-day Fever

In 1912, Deeks discovered "six-day fever" on the Canal Zone. I will take the liberty of quoting from an article that he wrote on this disease. "Its chief features are: The period of incubation is apparently about ten days. The disease is highly infectious and the infectious period probably precedes the onset



Operating Pavilion, Hospital Santo Tomas

nesium-sulphate solution. If parasites are present quinine is given hypodermatically or by rectum, and its effects carefully watched. Basham's mixture is also used, and Fowler's solution later on in the course of treatment. Tincture of chloride of iron is prescribed in 30-minim doses thrice daily, as soon as the quinine treatment is instituted.

Tropical Dysentery

Deeks has pointed out that the term "tropical dysentery" is misleading, since it has been regarded as synonymous with amebic

of the fever, inasmuch as no cases have occurred in the hospital by contact from the patients admitted, and no precautions have been taken to avoid contact. There are no constant or characteristic prodromata. There is always an abrupt onset, with chills or chilly sensations, and an initial temperature after the chill of from 101° to 104° F. The cases have all run a course of about six days of fever, more or less continued, with but slight morning remissions, and a more or less abrupt fall. The pulse and respiratory rates remain practically normal. The spleen has always been enlarged. The blood picture remains practically unchanged. There is always some nephritic irritation as manifested in a slight trace of albumin and a few granular and hyaline casts. There is always anorexia during the febrile course and a considerable after-depression."

Pellagra on the Canal Zone

At Hospital Santo Tomas, in Panama City, the records show that 84 cases of pellagra have been admitted since 1911, while at Ancon Hospital 47 cases have been treated. I find that pellagra has occurred more frequently among the Jamaicans and Barbadians who reside on the Isthmus. However, cases have also occurred in natives from the following countries: Martinique, Granada, Guadeloupe, Trinidad, St. Lucia, Antigua, Panama, and the United States. One case of pellagra developed in an American from Indiana, a conductor on the Panama Railway. This man lived in Mexico for four years before coming to Panama and possibly the disease was contracted in that country. He was discharged in good condition from Ancon after six weeks' treatment, and was able to return to work, but a few days ago he was admitted to Santo Tomas Hospital with all the symptoms of a recurrence of the disease. In my wards at Santo Tomas I have at present 5 women pellagrins, 4 of whom have every symptom of the disease.

DEATHS FROM PELLAGRA IN PANAMA, COLON AND CANAL ZONE

	Ancon Hospital	Colon Hospital	Panama	Colon	Canal Zone	Total
1909.....	1	2	..	..	..	3
1910.....	..	5	..	..	..	5
1911.....	1	11	7	1	..	20
1912.....	6	7	8	1	1	23
1913.....	5	4	14	..	..	23
1914 (9 mos.)	1	1	21	3	1	27
Totals	14	30	50	5	2	101

We see all the clinical manifestations of the disease: the scarlet red tongue, which is protruded with difficulty; dull pain in the stomach, with heartburn; diarrhea; vaginal mucous membrane red; anus red; the derma-

titis on the dorsal surface of hands, forearms, elbows, neck and feet; grave mental and nephritic complications, and so on.

In Santo Tomas we are treating these cases of pellagra as follows: Milk, broths and fruit juices as long as nausea and vomiting are present, and then a generous diet free from carbohydrates; dilute hydrochloric acid, 15 to 30 minims in a glass of water t. i. d. We have used Fowler's solution and salvarsan with varying results.

Dhobie Itch

In Panama we see many different kinds of skin diseases, but the most common is that persistent, troublesome disease caused by the *microsporon minutissimum*—dhobie itch. We have had a great deal of trouble in curing dhobie itch, but the following formula relieves the itching promptly and sometimes effects a cure:

Acidi salicylici	Gm. 2.00
Hydrargyri ammoniati	Gm. 2.00
Bismuth subnitratiss	Gm. 6.00
Olei eucalypti	Gm. 6.00
Lanolini, q. s. ad	Gm. 50.00
M. Sig.: To be applied to the affected part.	

Uncinariasis

The International Health Commission, which was organized in 1913, extended its campaign to the eradication of the hookworm from Panama and Dr. L. W. Hackett has been appointed director of this work in this Republic. Laboratories have been opened at La Chorrera, Panama City, and Bocas del Toro, and other laboratories will be opened as soon as the work progresses further.

Since this work has only just started very little can be said of it. At La Chorrera, 700 out of the first 1000 persons examined were found to be harboring hookworms.

The following treatment is carried out in these cases: Liquid diet at noon; calomel, grs. 3, at 4 p. m.; no supper; magnesium sulphate solution, 2 ounces at 1 a. m.; no breakfast; thymol, grs. 30 at 5 a. m.; repeat at 6 a. m. (in capsules); magnesium sulphate solution at 9 a. m. (2 ounces); dinner as usual.

Subarachnoid Anesthesia

I am sure that you will be interested in the success which we have had with subarachnoid analgesia at Santo Tomas Hospital. More than 4,000 cases have been operated on under stovaine in this hospital and with great success. This agent is used for all operations below the costal border unless absolutely contraindicated. The prep-

aration that we use is made by Carlo Erba, Milan, Italy, and comes in 5- and 10-centigram ampules (in physiological solution). The only preparation consists in painting the site for injection with a solution of iodine, to be followed by alcohol. We use the Récord syringe and a long platinum needle. These instruments should be boiled in distilled water.

The patient lies on his side with knees drawn up; a small amount of alypin solution is now injected subcutaneously to anesthetize the skin overlying the third and fourth lumbar vertebra. The needle is now pushed slowly forward through the skin and ligament until the dura is punctured, after which we have a free flow of cerebrospinal fluid. After 5 or 10 drops escape, the syringe is inserted into the base of the needle and the stovaine solution is injected into the subarachnoid space. Flexible collodion is painted over the puncture and a sterile gauze pad is fixed over the part with adhesive plaster. The patient is now turned over on his back and prepared for operation. In from three to ten minutes the patient is ready.

In genitourinary work and minor operations, we use 5 centigrams of stovaine and in other operations, from 8 to 10 centigrams. After the operation, morphine sulphate, 1-4 grain, is given to control postoperative shock. Stovaine is an ideal anesthetic, especially when the surgeon is confronted with lack of assistants. The after-effects are *nil*; the patient remains conscious during the operation; we have perfect analgesia; absence of postoperative shock; no postoperative pulmonary irritation; and no postoperative restlessness, which we see so frequently after ether or chloroform anesthetics.

Infant Feeding

One of the most prominent physicians in the Panama Canal Medical Service has made the following statement: "About 20 percent of the babies born in Panama die before they reach the age of one year, and a greater number of these from preventable causes."

Of course the majority of these cases occur among negroes and Panamanians of the lower

classes. One reason for this high mortality is the use of sweet condensed milks and "pap." When a negress says that she is giving her baby "pap," she means that she is giving the child almost anything that can be eaten or drunk.

The Department of Sanitation of the Isthmian Canal Commission has published a table for feeding infants which is given below in abbreviated form.

TABLE FOR INFANT FEEDING

Age of Infant	Formula	Amount of each feeding	Interval of feeding	No. of feedings daily	Diluent water
1 day.....	Plain boiled water		two	or three	times
2 days.....	A B C	1 3 60	1 1/2-1 oz.	2 hrs.	6-8 Boiling
3 days.....	1 3 50	1 1/2-1 oz.	2 hrs.	3	Boiling
4 days.....	1 3 40	1 oz.	2 hrs.	10	Boiling
5 days.....	1 3 30	1 oz.	2 hrs.	10	Boiling
6 days.....	1 3 24	1 1/2 oz.	2 hrs.	8-10	Boiling
7 days.....	1 3 20	1 1/2 oz.	2 hrs.	8-10	Boiling
1 to 4 weeks...	1 3 16	2 oz.	2 hrs.	8	Boiling
4 wks. to 3 mos.	1 3 12	3-4 oz.	2 1/2 hrs.	7-8	Boiling
3 to 6 months..	1 3 12	5-7 oz.	3 hrs.	7	Boiling
6 to 9 months..	1 3 12	7-9 oz.	3 1/2 hrs.	6	Barley
9 to 12 months..	1 3 12	8-10 oz.	4 hrs.	5	Barley

A—Sweet condensed milk.

B—Unsweetened condensed milk.

C—Boiling water, or, after six months of age, barley water.

One or two teaspoonfuls of lime water are added to each bottle just before feeding. Also a few grains of salt is added to each feeding. If constipation is encountered, one teaspoonful of milk of magnesia is used instead of lime water. The results obtained here, after using this method of infant feeding, have been perfectly satisfactory.

Other Diseases Encountered

The secondary eruption of syphilis is seen frequently among the natives and West Indians. A large number of cases of beri-beri have been seen at Santo Tomas, but a majority of them have come from Pearl Island, fifty miles from Panama City, and the victims are usually pearl-divers.

Since 1905, no cases of yellow fever have originated on the Canal Zone, and since 1908 no cases of bubonic plague.

Only two cases of sunstroke have been reported since the Americans have occupied the Canal Zone. These occurred in foreigners and were reported by Major George Crabtree, Medical Chief, United States Army.



A Visit to London and Sir Almroth Wright

By HERMAN J. ACHARD, M. D., Asheville, North Carolina

IN THE fall of 1913, when the government investigation of Dr. Karl von Ruck's method of preventive and therapeutic immunization against tuberculosis had to be interrupted by Doctor von Ruck, at least in his laboratory in Asheville, because of a difference of opinion concerning the manner of conducting that investigation by the representatives of the Hygienic Laboratory, the Doctor decided to have his tuberculosis remedies investigated and, if possible, confirmed by impartial observers abroad of whose competency and fairness there could be no doubt. Accordingly, arrangements were made with Sir Almroth E. Wright, at St. Mary's Hospital in London, with Privatdozent Dr. F. Weleminsky of the Hygienic Laboratory of the German University of Prague, and, later, with the directors of the Ser-Therapeutic Institute in Vienna, the Pasteur Institute in Paris, the Hygienic Institute in Danzig—Professor Petruschky, director—and, at the latter's suggestion, in the Koch Institute in Berlin.

Since early in March of 1914, my colleague, Doctor Clemenger, of Asheville, had been in London, attending to the immunization of a number of experiment animals, and, in June last, Dr. Karl von Ruck himself went abroad to conclude the experiments in London and then to go on to Prague, where likewise experiments had been started for him. I accompanied him, partly at his personal wish, partly for the purpose of aiding in the work in London and of attending to that in Prague, Danzig, and elsewhere.

In London, we were detained, principally on account of the great prevalence of pseudo-tuberculosis among guinea-pigs and rabbits, which made our work with these animals almost impossible. When finally we succeeded in completing our part of the work, by infecting all the animals used in our experiment, and these thereafter required only watching and suitable care until the proper time when they were to be killed and examined, the war had broken out and it was impossible for us to reach the Continent. There was nothing left for us but to return to Asheville, and we were only too glad to do so.

During our stay in London, I was closely confined to the work in the laboratories in St. Mary's and when not there I was almost entirely with Doctor von Ruck, whose health

by no means was good. This is the reason why I saw nothing of "medical London" and hardly anything of the city itself. Of course, I walked through the streets and observed people and things; in fact, these were so much more interesting than the few big show places I had an opportunity to inspect. I have seen the British Museum, Saint Paul's, Buckingham Palace, the War Office, Westminster, and the Houses of Parliament, and a lot of other notable institutions, but have entered only a very few of them. Of all the numerous hospitals I have seen none other than St. Mary's.

But for a few rides on the 'bus and one ride out in the country, when accepting Sir Almroth's invitation to spend Sunday afternoon at his cottage in Stokes Poges, nothing of the country round about London came to my observation, and even Kew Gardens and Crystal Palace are only dimly in my remembrance from having seen them on a former occasion, twenty-six years ago. Consequently, all I can speak about concerns Sir Almroth and his institute, besides what I saw and observed in going along the streets of London.

A Thumb-Nail-Sketch of Sir Almroth

Almroth E. Wright, the second son of the late Rev. Charles H. H. Wright, D. D., was born in the year 1861. He was educated at Dublin University (B.A., first gold medalist in modern literature, 1882; M. B.; B. Ch., medical traveling prize); had studentship at Inns of Court in jurisprudence and Roman and international law; and also studied at the universities of Leipzig, Strassburg, and Marburg. In 1887, Doctor Wright was demonstrator of pathology in Cambridge University; in 1889, he received his degree of Doctor of Medicine; and for the next two years he was demonstrator in physiology at Sydney University. From 1892 to 1902, Doctor Wright held the position of professor of pathology in the Army Medical School at Netley; was a member of the Indian Plague Commission from 1898 to 1900; and in 1902 was appointed pathologist at St. Mary's Hospital, London.

The Department of Therapeutic Inoculation at St. Mary's Hospital was instituted by Wright in the fall of 1905. The method of vaccine treatment had, prior to this, been gradually perfected by him in the pathologi-

cal laboratory of the hospital, and the treatment of patients by this method had been carried out for three years in the pathological department (*Medical Record*, June 3, 1911).

In 1906, Doctor Wright was knighted; became a Fellow of the Royal Society in the same year; and in 1908 he received the Fothergillian gold medal from the Medical Society of London. He is also an Hon. F. R. C. S. I. and Hon. Sc. D. (Dublin).

Sir Almroth E. Wright is the originator of the prophylactic antityphoid inoculation treatment, which he introduced during the Boer war; of the system of therapeutic inoculation for bacterial infections or "vaccino-therapy"; and also of methods for measuring the protective substances in the blood. He is the author of several books, besides contributing numerous articles to current medical literature. (The foregoing information has been supplied by the Research Bureau of Nelson's Cyclopaedia).

The first time that I saw Sir Wright he was at tea, surrounded by his assistants, all drinking tea, eating cake, and chatting. Tea is more than a custom in England—it is a solemn rite. The Englishman would rather do without his cigarette or his pipe—and he loves both—than without his afternoon tea.

Everybody takes tea at four o'clock or so, and for the time everything is at a standstill. As soon as one of the laboratory servants announces "Tea is served," all the work stops. Whoever happens to be talking to you breaks off with "Come, let's have some tea," and leads the procession to the inner laboratory, where a white cloth is spread on one of the work-tables. A silver tea-pot, donated by some former assistant, a ditto sugar-bowl, an ordinary quart bottle of milk, heavy crockery cups in far greater number than are likely to be used, and two or three teaspoons for the crowd. A bagful of cookies

or cakes or something of the sort are quickly spread on a platter, and soon everybody is happy, drinking tea and conversing. What odds that the subject of conversation is "shop"; that's a matter of course among medical men. But it's informal, it is chatting, and it is rest.

There is Sir Almroth, seated in a comfortable chair after having filled his cup; everybody waits on himself. The assistants about him, leaning their elbows on the table, some chance visitor, all engaged in their beloved afternoon "snack." We follow as a matter of course and actually enjoy tea and cake and the conversation, the latter spontaneous and sincere, and not infrequently including a considerable amount of guying.

As already said, the function is strictly informal and therefore enjoyable. But let some luckless visitor become fulsome or formal—Doctor Freeman told me that it was especially American visiting physicians who make that sort of break—and tell Sir Alm-

roth of the great honor that is being done him, and the inestimable privilege he is enjoying of taking tea with Sir Almroth E. Wright, and he freezes up at once and the happy play-hour is spoiled.

Wright does not like formality. I had met him three or four times when, tea being announced while I was talking to him, he got hold of my arm and said, "Come, Achard, let's go to tea."

One Saturday soon after our arrival one of his assistants came to us and transmitted Sir Almroth's invitation for the next day to take tea with him at his cottage in Stokes Poges, and he begged us not to don any formal clothes, because that would spoil Sir Almroth's pleasure. He does not like fulsome compliments.

A simple acknowledgment or statement of the importance of his work, of help derived from his writings, pleases him:



St. Mary's Hospital, Where Sir Almroth Wright Works

Anything laudatory, any kowtowing is distasteful to him.

Wright has a keen sense of humor. His kindly blue eyes, which blink through bisected lenses enclosed in heavy silver spectacle-frames, usually have a good-natured twinkle. And he likes a good joke. Once in the clinic, he raised some absurd question and then remarked that it would be such fun to refer that problem to the Pasteur Institute in Paris, because it "would make Roux so angry." I have been trying to remember just what it was about, but all I can recall is the quiet chuckle and the twinkle in those clear eyes as he repeated, it "would make Roux so angry." When one of the clinical assistants whom Doctor von Ruck had vaccinated exhibited a tremendous reaction and felt absolutely rotten during the first forty-eight hours, Wright twitted von Ruck unmercifully and accused him jokingly of having done the most awful things to "poor Horer." Poor Horer, indeed! A few weeks later, one evening, he was indulging in some horseplay with the other internes and struck his knees against the wall, breaking both patellas. The poor devil was terribly "cut up," for he had entered the service only recently and was to have gone up for examination. In August, when we quit London, Horer, instead of going to war, was lying in bed with his knees in plaster casts.

The Staff of the Wright Laboratories: A Happy Family

Wright is surrounded by a splendid set of assistants, who fairly worship him. There, for instance, is Captain Douglas, his coworker for many years, retired from the Indian Medical Service because of ill health. A clever laboratory worker, excellent bacteriologist, and experienced experimenter, Douglas is, himself, no mean authority upon infectious diseases and has a remarkable and keen understanding of the problems of immunity. He has been associated with Wright for years, and many important papers were published by them jointly.

Captain Hayden, whom an attack of anterior poliomyelitis left with both legs paralyzed, sits at his workplace, always busy, always cheerful and smiling. He prepares the cultures for vaccines, does most of the opsonic and also some Wassermann work. He has devised several valuable laboratory apparatus.

Mr. Alex Fleming is a syphilographer of note, who in 1909 proposed a Wassermann-reaction technic for quantitative work which

gives the most clear-cut results I ever have seen. Mr. Fleming resents being called "Doctor," in common with many English medical men. He often seems to have a sneer for persons and things around him, but is true-gold, nevertheless. He considers his specialty to be the "best ever," because it is so tremendously interesting, and, moreover, "there is absolutely no temptation, because you know just exactly what the women are who come to you."

Dr. John Matthews is a tall, good-looking chap of soldierly appearance and bearing. He is extremely faithful in his attendance both in the laboratory and the clinic. He also does Wassermann work and at present is engaged in some special investigations.

Dr. John Freeman, tall, spare, friendly, is the youngster of the crowd. I was told that Doctor Freeman went through the Boer war as a private, and that he is a dead-shot. At the beginning of the present war he promptly enlisted, because he "wanted to shoot up some Germans." His principal researches refer to the prevention and treatment of hay-fever. By prophylactic vaccination with a vaccine prepared from the particular pollen to which a hypersusceptibility exists, he claims to be able to prevent an attack. His therapeutic experiments have not yet produced tangible results.

Doctor Colebrook and Dr. Parry Morgan accompanied Sir Almroth to the Transvaal, in 1913, for the purpose of investigating the problem of pneumonia infection in the mines, and to discover means for its prevention.

Doctor Colebrook, the *fidus Achates* of Wright, and his constant companion, is very close to the Doctor and aids him in much of his literary work. Doctor Morgan, a Welshman, has a fondness for mathematics and attempts to reduce every problem to a mathematical equation. During our stay he had just perfected a most ingenious method for the application of artificial pneumothorax. There remain the clinical assistants, Doctor Horer and Doctor Turner, the former of whom I have mentioned. Doctor Turner I did not come to know at all. Mention is also required of Doctor Colebrook's dog, a tiny, coal-black Pomeranian, who is the general pet and is as noisy as he is tiny. At tea time he is an important member of the "round-table."

Everyone Has a Pet Name

An odd custom, to an outsider, which these grown men have taken over from their school days is the habit of calling everybody by a

pet name: Douglas is promptly abbreviated to "Duggy," Colebrook to "Coley," Fleming becomes "Flemmy," Hayden is "the skiffer" (I did not learn the origin of this nickname), Morgan is called "Parry" and so on. Wright is "the Old Man" or "Pa," even so called to his face. His relations to the men are the most cordial and they will do anything for him.

Captain Douglas also succeeded in training a good set of servants, all of whom do their work under the somewhat martinet-like supervision of George, the chief of them, like clock-work.

Altogether, once having succeeded in breaking through the natural reserve which is as much a part of the Englishman as are his "morning coat" and his silk hat, we found these men most cordial and exceedingly courteous, always willing to discuss any topic of interest broached or to enjoy a joke. Aside from their duties in the laboratory, in which they carry out important and interesting researches, they also are instructors in the medical school of the hospital and in the special courses given in the laboratory; the latter being visited by physicians from all over the world. Of course, the assistants also attend to cases on clinic days.

Work in the laboratory nominally starts at 10 o'clock in the morning; however, at this hour the place still is in the hands of the servants, who clean up the whole establishment with the greatest care; but, by 11 or 12 o'clock, all of the men generally have arrived and the work of the day is under way. The laboratory-day lasts until 5 or 6 o'clock, although not infrequently one or the other of the workers will be busy with his experiments far into the night. I myself have spent many a night there, doing complement-fixations.

Those Clinics

When Wright wrote as the motto of his "Studies on Immunization" that the physician of the future will be an immunisator, he expressed his honest conviction, upon which he acts. For, in his clinics, pharmaceutical therapy is practically absent. One of his assistants repeatedly asked me in regard to some alkaloids I had mentioned and referred to the fact that with them drugs virtually were taboo.

Sir Almroth is very tall and very large. He is big in everything, in body, mind, heart. It is beautiful to watch him, on clinic days, speak to his patients, all of whom are exceedingly poor. He questions these people—uncouth and ignorant mostly they are—and

enters into their cases as though there were nothing else for him, and all this with a so manifest and sympathetic air of interest that one does not wonder at the worshipping affection with which the patients all regard him. Even the children are not afraid of him, but are quite willing to be examined and then to be pricked with the inevitable hypodermic needle. True, their reward of a penny for their fortitude is never forgotten. Sir Almroth takes care to fill his pocket with these useful bribes on clinic days. On these days, the stairways and the halls of the department are crowded with people wanting to see Sir Almroth.

His clinic is held in one of the laboratories, while several of the assistants receive patients in separate treatment rooms. About half a dozen patients are admitted at one time into the laboratory, where Sir Almroth is standing by a work-table covered with bottles containing different vaccines, a number of hypodermic syringes, cotton, alcohol, and an apparatus in which oil is kept boiling for sterilizing the "hypos."

As the patients come up, one at a time they hand over their record cards, which are obtained in the secretary's room on entering the building. Each in turn, Sir Almroth questions the patients concerning their progress. The records are kept almost entirely in accordance with the subjective reports of the patients, while the vaccines are administered according to the kind of infection discovered in the secretions. At times, auto-vaccines are prepared and employed. Quite frequently multiple vaccines are used to a degree amounting to polypharmacy. For the treatment of tuberculous lesions, Wright uses Koch's T. B. emulsion (B. E.)

Physical diagnosis is rather neglected at St. Mary's, in favor of bacterial diagnosis. Dr. Parry Morgan expressed his astonishment at the interest displayed by Sir Almroth in the chest examinations demonstrated to him by Doctor von Ruck, as he has always been rather inclined to pooh-pooh them. During our stay there, Sir Almroth frequently asked Doctor von Ruck to examine patients for him, and was immensely taken with the ability shown by the Doctor to foretell much by inspection of what percussion and auscultation would disclose.

The clinical material contains an unusual amount of cases of scrofula and of lupus, both of which appear to occur far more frequently than they do with us. This possibly may be explained in accordance with the views of the late Professor Arloing, who believed

that the bacilli producing scrofulous or lupous lesions were less virulent than those responsible for pulmonary tuberculosis. As a nation, the English certainly are less inclined to pulmonary tuberculosis than many others. Their resistance, however, is only relative, and the predilection of the tubercle bacillus for the lymph-glands and for the skin gives rise to dreadfully disfigured faces and "shocking" scars.

The work for which we had come to London kept me occupied a great part of the time in the animal-room, where we had established our workshop, and, as this was in quite another wing of the hospital, away from the inoculation department, I did not see nearly as much of the latter as I might have wished. Nor did I find the time to go through the hospital or to see other hospitals and medical schools. Even of the visitors from the great Surgical Congress, held in July, I saw as good as nothing. For that reason, it is impossible for me to touch upon medical life in London, as I have said before, and can only chat briefly about my own experiences.

What One Sees in London

The street-life of London presents many interesting phases. First and foremost in their insistent claim for notice are the motor "busses," the successors of the old horse-drawn public conveyances through those narrow London streets. Electric cars, or "trams," are run only in certain portions of the city.

The London motor "bus," a double-decker like its predecessor and garnished with garish advertisements both outside and in, apparently is operated primarily for the purpose of satisfying the racing proclivities of the motor-man, or, rather, the driver. Regardless of signals from would-be or actual passengers, this worthy races through the crowded narrow streets and past every other 'bus that he can overtake. Arriving at the preordained stopping-corner, it never occurs to him to fall in line. He drives his 'bus to the head of the line, no matter how many other 'busses may be standing there. If the waiting patrons have to walk half a block before they can board his arch, that is their lookout; they may take a taxi, if they don't like it. During my eight weeks' stay in London I saw just one 'bus-conductor who was polite. He was a happy exception. As a rule his breed are an objectionable, surly, and degenerate lot, in sharp contrast to the police officers, who, for the most part, are courteous and obliging and who direct and guide the

stranger with the greatest patience and politeness.

The "shops," or stores, impressed me principally as being exceedingly crowded with goods. Floor space must be very costly there. The show windows likewise are crowded, dressed without taste or system. I do not recall six "shops" where window-dressers seemingly were employed or where the display windows showed any care and study. In these respects, American stores and store-windows are far superior to the English. However, the sales clerks are obliging and quite willing to show their wares. Of course, they recognize American customers by their translating English prices into American money values. Sir Wright once acknowledged to me that the English monetary system—pounds, shillings, pence, farthings—was "barbarous."

As to the crowds one sees on the streets, there is much truth in Doctor Hollen's description (*CLIN. MED.*, Sept., p. 776). If the women are homely and frumpy, the men are untidy and sloppy. I have seen few good-looking, well-dressed women and just as few well-groomed men, and those generally were Americans. The street crowds are orderly enough. A remarkable feature is the absence of soliciting on the street in the evening, and comparatively few women "walk the streets." Those cypriennes are watched closely by the "constables" and may not address men or solicit their patronage. John Bull thinks that in this manner he can solve the prostitution problem. Yet, I have been told that clandestine prostitution exists in London to a terrible extent.

In all but the principal shopping and residence streets, the corner saloons are in evidence, both by sight and by smell; only all too often these "ale-houses" can be recognized from afar by the slatternly women standing outside gossiping, each with a glass of ale in her hand, while their lords and masters are inside at the bar—a very army of "Sarey Gamps" who "likes it regular and drawed mild."

There might be much to tell of Hyde Park, Oxford Street, Piccadilly, then the Strand, the Temple, Fleet Street, and all the places known to us by name, from Dickens' writings, but I fear the editor would bluepencil me; for, after all, I could give only a rambling account of rambling strolls, taken mostly in the evening, after having finished my work in the laboratory.

As a whole, I must say that I do not like London. Still, I have not given it a fair

chance, not having had time to "see London." There are impressive buildings and beautiful statues, magnificent parks and many things of interest. Possibly, if I could spend six months and lots of money in London, with nothing to do but to amuse myself, I might find much to like. If that opportunity ever should come, I hope, though, to be favored with seasonable weather. Even during the summer season we wore winter-clothes and overcoats almost constantly, when "back" home in the States, folks were sweltering.

When the War Broke Loose

The last days of July naturally were full of tension. The catastrophe in Serbia, which led to the declaration of war by Austria, seemed to foreshadow some great calamity, and during the subsequent days the political situation was watched with unusual interest. Until the English government officially decided to war against Germany, on the side of her allies, France and Russia, opinions were somewhat divided, although the jingo press of London was doing its best—and very successfully too—to incite the popular mind against Germany.

Being unable to obtain other than English newspapers, it was difficult to form any definite opinion, and the action of the Kaiser, in declaring war in quick succession against Russia and France, seemed so foolhardy as to be criminal. The last months have brought fuller information, and, with it, better counsel, and at the present moment the position of Germany is being viewed more justly.

At St. Mary's, the question of war naturally formed an interesting topic. Inquiries had been made, as in all London hospitals, concerning the number of medical men that could be counted upon; but, beyond that, things moved in their accustomed course. All this was changed the first of August, when it became known that England had entered the conflict. It was on Saturday, a half-holiday, and the town fairly went mad. In St. Mary's, immediate steps were taken for the preparation of typhoid-vaccine for use in the army, over 100,000 doses having been promised for delivery within a few days, and the entire staff turned to making vaccine. Everything else was put aside. The war and the preparations for war were foremost.

Then Came the Foreigners' Tribulations

Then came a difficulty about money. Travelers' checks were no longer accepted. The government had declared a moratorium. Saturday the banks closed. Monday was

a bank holiday, and this was extended for three days, so that it looked as though we might get into difficulties, like many other Americans. Several visits to the U. S. Express Company on Monday were fruitless. The office was closed. Meanwhile it had become evident that it would be quite impossible to proceed to the continent, and so, we decided to take passage home—if we could get it. The steamship-offices looked like a stock exchange. Crowds besieged the desks and snapped up all and every chance to get back to America, first class, second class, steerage—it was all one, so you secured passage. The tickets were taken and all berths engaged two, even three, months ahead.

At the Adams Express office, on Cockspur street, I had been promised a reservation for Doctor von Ruck and myself on the S. S. Cameronia, Anchor Line, to sail from Glasgow on August 15. We had to crowd in with two other men, but there was no help for that. "Decide quickly, please, lots of people are clamoring for the tickets." So I paid a few pounds down, to hold the berths. But now arose the question of payment. U. S. Express checks? Sorry, we can hardly take care of our own checks. American gold or gold certificate? Very sorry, we can't take it. Nothing but English gold or bank-notes.

Tuesday, August 4, I went to the U. S. Express office, on Haymarket, to get some money. A crowd stood in line, down the block and into the side street, and I had to wait in line two and one-half hours before I could get up to the desk. All sorts of things were told during that wait. One woman was fretting about her daughter who was alone in Paris; another one hoped that her daughter was safe in Dresden. Some people had just come from the continent, *sans* baggage, *sans* food, *sans* the money (except in the shape of travelers' checks) for food, *sans* hat, *sans* everything—except that wild desire to get back to Uncle Sam's shores.

When I finally reached the desk, where six clerks were busy at that many windows, I asked to have cashed a \$300 check. "Sorry, but I can give you only \$40."

"But I must pay for my ticket."

"Sorry."

Finally I agreed to waive gold and accept banknotes for \$100. I tried another line at another window, and got \$50 more. When I left the building I gave another check for \$100 to Doctor Clemenger, which he managed to get cashed also. In this way I was enabled to pay for the steamer-tickets and had

enough left for our hotel bills and for the railway trip, with incidental expenses to Glasgow. Here, at last, we took the steamer for home.

The last days in London hardly were pleasant. The servants of the hotel were inspired with grave suspicions, because we had a typewriter in our rooms and "typed" a great deal. Accordingly they lodged information at police headquarters, that there were two men, one certainly German, the other possibly so, whom they believed to be spies. Two constables called to look us over, and they must have been satisfied about our harmlessness, for we heard nothing further of the matter.

The announced sailing of the "Cameronia" was as problematical as that of every other boat, and we could not obtain definite information until the morning of departure, in Glasgow. Even the train, which was to take us to Glasgow, was not certain to leave, until about an hour before it started, when we were told that "in all probability the trip would be made."

It was all too unsettled and too irregular to be agreeable. Besides, I had not had a decent smoke, either pipe or cigar, since leaving home, and I was "honing" for a smoke. The first thing I did, upon arriving in New York, was to buy some real cigars and some real tobacco.

His First Baby

By DR. FRANK L. ROSE

Hey there! You little wrigglin' chap,
Winkin' and blinkin' on grandma's lap,
What do you think of all this biz?
Cute little feller—ain't he, Liz?

Say, Doc, how much d'ye s'pose he'll weigh?
Ten pounds! Beats Jones's anyway,
Hully Gee! What an arm that is!
Reg'lar Jim Jeffries—ain't he, Liz?

Just see him doublin' up that fist!
He's goin' to be a pugilist,
Or else a preacher, or else—Gee whiz!
Whoops like an Indian—don't he, Liz?

Seems to say as plain as can be,
"I'm lonesome, that's what's a troublin' me,"
Lonesome the poor little fellow is,
But we'll be good to him—won't we, Liz?

Say, Doc, you goin'? Well, good night!
Here's twenty dollars: is that all right?
I'm satisfied and I'll bet she is.
Pretty good doctor—ain't he, Liz?

Five Hepatic Remedies

A Study of Neglected Vegetable Agents of Great Value

By FINLEY ELLINGWOOD, M. D., Chicago, Illinois

Author of Ellingwood's "Therapeutist"; Author of the "Treatment of Disease," and "Materia Medica, Therapeutics, and Pharmacognosy."

IN CONSIDERING that class of vegetable remedies which directly influence the liver, its structure or its functions, we have a number of very choice agents that, when thoroughly understood, exert an influence with which that obtained from the inorganic—mineral, earthy or synthetic remedies—is in no way comparable.

This action seems to be at once harmonious with the functional operations of the organs, and restorative, both in a general and specific way, of the functioning of the liver, correcting also any harm that has been done, by the imperfect action of this gland, to other organs or structures of the body.

This corrective influence is in the nature of an alterative, and in nearly every case the action of the remedy is much wider than that of one acting upon this organ solely.

To illustrate. *Iris versicolor* acts upon the liver, and at the same time corrects imperfect digestion by regulating the gastric secretions and to a mild extent those of the intestinal tract. However, a striking result from this remedy, due to its influence on glandular structures, is its modification of those conditions of the skin which have resulted from the imperfect functioning either of the liver or of other glandular organs.

Podophyllum, the most drastic of the hepatics, acts upon the entire intestinal tract; in fact, upon all the glandular organs of this tract, to some extent.

Chionanthus, as will be seen later, acts upon the composition of the blood as well as upon the liver; and, in addition, I am convinced, it has a specific selective action on the pancreas, as its influence upon diabetes mellitus, due to disease of this organ, has proven.

Podophyllum

In administering *podophyllum*, in any of its forms, we are not, to any great extent, guided by its physiologic action. This physiologic influence is directed principally to the gastrointestinal tract; and so severe and so harsh is this that it must be avoided, since the conditions induced are pathologic rather than physiologic.

Our studies of the action of this remedy for medicinal purposes have developed from

empirical observations, and from these observations nothing in the way of precise action has been deduced, other than that shown by the indications immediately to be enumerated. Why or how it should so act, we do not pretend to explain.

Specific Symptomatology

The symptoms which guide us specifically in the selection of this remedy are as follows:

The most conspicuous symptom is the full, thick tongue, which is broad and pale, usually heavily coated, the coat of a dirty-yellow color at the base, with a dirty stripe, upward toward the tip, in the center of the tongue.

The entire venous circulation of the body is sluggish; there is fulness of the tissues; the heart's action seems to be impeded; the pulse is large, soft, but apparently oppressed.

There are all the indications of torpor, inactivity or actual atonicity of the entire intestinal tract. Usually there is pronounced constipation, resulting from imperfect peristalsis because of lack of normal nervous irritability. Often there is vertigo, dull, heavy headache, more or less complete anorexia, and all the abdominal viscera are in a plethoric condition. Torpor of the circulation of the liver is shown by a dirty appearance of the skin or by yellowish conjunctivas. The fecal discharges frequently are very light-colored, light-yellowish or gray, and float upon water; still, this condition so often is present, without the train of symptoms just described, except for the evidences of a mild jaundice, that it is met better, perhaps, with *chionanthus*—as will be shown later on.

It is seldom that physicians in large cities encounter this train of symptoms, unless the patient has recently come from a malarial neighborhood. These symptoms are met with more frequently in malarial regions, as the result of malarial influences; and there is no doubt that in the thickly populated sections of the country, especially among those not engaged in rural occupations, these conditions are infrequent. The habits of city life are likely to bring on a train of symptoms that are diametrically opposite to those here named.

Podophyllum is contraindicated whenever there is constipation or irritation of the stomach or bowels from inflammatory causes, or where any of the gastrointestinal organs are in an abnormally irritable condition. There is a group of symptoms, characterized by sallow skin and yellowish conjunctivas, where the patient is in a high degree inactive, listless, and very constipated, while the liver is markedly sluggish—a state known as biliousness. In this condition, there are times when the bile seems to escape very freely, the patient vomits bile, and, owing to absorption, bile is found in the urine, which latter is highly colored and at the same time contains large quantities of uric acid, besides urates in great excess.

If, by percussion, the liver is found to be enlarged and the dulness greatly increased, while the patient is indisposed (as is the rule), and there is soreness over the liver and pain throughout the right hypochondrium, podophyllum is indicated.

In that form of constipation which is characterized by infrequent discharges of solid, hard stools, which may at times be almost black in color, but usually are grayish or of clay color, podophyllin is markedly beneficial. However, if these symptoms be accompanied by jaundice, I have secured better results from some one of the others of this group of remedies. Its effect upon chronic constipation and in the treatment of gallstones and jaundice will be mentioned further on.

Podophyllum can be combined with nuxvomica and collinsonia and thus given for the treatment of hemorrhoids, with excellent results. The specific conditions having been determined, this combination will cure many conditions not otherwise influenced. However, the indication for podophyllum here will disappear very much more quickly than those for the other two remedies named, especially that of collinsonia, and the latter, either alone or combined with hamamelis, can then be continued until the cure is complete, which need not be long; again resorting to podophyllum, however, if its specific indications reappear.

I have used podophyllum, in the form of fluid extract or the "specific medicine," as an alterative, during my entire practice. If a condition of general plethora is present, the skin is waxy, dull or yellowish, or if there be any skin disease present, I often add to my other alterative remedies just enough podophyllum to ensure a normal bowel movement each day. I have seen surprisingly good results to occur from its use in this manner. I

combine it with phytolacca and very small doses of acetate of potassium in the treatment of those mild forms of eczema so common on the faces of infants and also older children, where there is a cracked and fissured condition of the skin, or where there is a tendency to persistency in mild pustular conditions. I have seldom been disappointed in these cases, occasionally using at the same time some mild external application.

Podophyllin in Venereal Disease

I seldom, if ever, omit podophyllum in the treatment of syphilis with vegetable alteratives. Right here I want to impress upon the readers of this journal the fact that syphilis positively can be eradicated from the system, even in the third-stage cases, by the persistent use of vegetable alteratives. I may, if the editor will permit, at some future time write an article on the treatment of syphilis without mercury, and that by the use of this class of remedies.

So strongly is the profession impressed with the idea that syphilis cannot be cured except with mercury and arsenic, and especially that it cannot be cured with such mild remedies as the vegetable kingdom produces, that no practitioner will undertake the cure with this class of remedies on its first suggestion; invariably must he use some very powerful inorganic remedy.

But, once a physician has cured a bad case by means of vegetable alteratives, with perhaps the addition of iron, if there be anemia, the surprisingly smooth, satisfactory, and very complete results obtained will so convince him of this curative influence that he will not hesitate to try it a second and a third time; for, repeated successes will convince him that this method is wonderfully efficacious and satisfactory, not only so far as the physician is concerned, but the patient as well, while there are absolutely no untoward consequences whatever.

The use of podophyllum in the treatment of gonorrheal epididymitis has been recommended by one of our best authorities. This writer claims that, if it is given with the bitartrate of potassium and given in proper-sized doses every two hours, it will relieve the pain and greatly abridge the inflammation.

Incidentally, all that I have said concerning podophyllum applies to the fluid preparations of podophyllum-root. The resinoid, or podophyllin, has a somewhat different field. It is more than likely, however, that careful adjustment can secure very satisfactory results in the field above named, although my

own experience has been with the other form of this remedy.

The resinoid was introduced to the medical profession by Dr. John King, who first prepared it. This at one time was, and in fact is now, used more extensively than the fluid preparations, not only by "regular" physicians, but also by those of our own school. It was the very first of the resinoids to be separated and was brought out in 1835.

This resinoid possesses the cathartic properties of the complete medicine in an active form. Some individuals are more susceptible to it than are others. A cathartic dose usually requires six hours in which to operate, but the action is drastic and persistent and may continue, especially if a large dose be given. The influence of this action is general, not only increasing the secretions of the intestinal glands but those of the skin and kidneys as well, while in many cases it produces ptialism, like mercury. At one time it was called the vegetable lancet, because of its action upon the secretions.

Large doses of podophyllin have long since been avoided. Its preparation in various triturations enhances its action and prevents any irritating influence.

Specific Symptomatology

The indications for the use of podophyllin are similar to those named for podophyllum, except that there is usually more dizziness, in some cases extreme vertigo, in which a full dose of podophyllum will produce an effect sufficient to remove the entire condition temporarily. There is general indisposition, lethargy—inactivity; there is atony of the intestinal tract, also sense of weight and fullness throughout the entire abdomen. There is an expressionless countenance; also fullness of the veins and a full, open pulse. The stools are distinctly clay-colored and float upon water, or they may be hard and dry, in the form of scybala. The abdomen is distended and there are constant colicky pains.

It is contraindicated whenever there is irritation of the intestinal tract, where the features are pinched and the tissues are contracted, where the pulse is small, wiry, and hard, with a sharp stroke.

Wherever there is a thick coat at the base of the tongue and a narrow yellow coat, yellowish and dirty, down the center of the tongue, a trituration of podophyllin, by means of which the patient will get 1-40 to 1-150 of a grain at a dose, taken before meals and at bedtime, will induce very prompt action. The remedy will exercise its in-

fluence without irritating the stomach or bowels.

It is surprising how promptly a train of symptoms will yield to the beneficial action of granules of podophyllin. It is much better to give this remedy in minute doses and repeat them oftener than it is to give less frequent large doses.

Podophyllin materially facilitates the removal of gallstones. It will permanently cure the conditions which give rise to them, and those which cause chronic constipation. In the latter condition, like cascara, it must at no time be given in full active doses.

It will stimulate intestinal secretions and peristalsis in children quite satisfactorily, will overcome dry stools and that condition of constipation in which there are erratic colicky pains and a distended abdomen; but the dose must be very small.

While it is commonly used as a remedy for jaundice, it will be found, before we get through with this article, that we have better agents or that we have agents to be combined with this one to better advantage than the podophyllin alone. It is usually combined to advantage with hyoscyamus or belladonna, to prevent its irritating influence, when given as a laxative.

Leptandra

Leptandra virginica is one of our old-time liver remedies, from which I, personally, have obtained very satisfactory results. It will be observed that the specific indications for these hepatics are very similar, but I am inclined to think that this one is more characteristically the malarial remedy.

In these cases as mentioned under podophyllum, there is wide dulness, on percussion, over the right hypochondrium, fullness of the superficial circulation of the abdominal structures and sluggishness in the capillary circulation of the intestinal glands. There is a cool or cold skin; a general dull pain in the bowels; melancholia, general depression; great lassitude; all these especially from malarial causes.

There is a special group of symptoms that I have frequently found, in which I have given this remedy, with excellent results. In addition to the above-named initial symptoms, the patient becomes very sluggish, anemia develops and progresses, and ultimately dropsy follows. Later, the tongue becomes thick and pallid, easily indented by the teeth; there is palpitation, and a gradual loss of strength until the patient is thoroughly incapacitated for any physical labor. The

heart may not be actually diseased at first nor may the kidneys be greatly involved, but those organs are liable to become seriously impaired later, all from chronic malarial conditions. The resinoid, or concentration, leptandrin, acts fully, I think, in the entire field of the fluid preparations.

Action on Periodicity

I think the most satisfactory results I have ever obtained from leptandra were from the use of proper doses associated with quinine and some gastrointestinal stimulant, to break up the periodicity of protracted malarial fever.

I believe that there is a definite time in which to give quinine for its immediate effect on periodicity. In severe cases, many physicians have failed to secure results from enormous doses of quinine, because it was not given at the proper time.

I remember distinctly one of my first experiences. I was called in consultation with an old physician, who had given from 1-2 dram to 1 dram per day, perhaps for a long period, without results. The patient, at the time for the chill, would become unconscious and subsequently would have a mild form of delirium or mental perversion.

The doctor asked me to write a prescription applicable, in accordance with my judgment, to that particular case. I prescribed a dozen capsules, each of which contained 3 grains of quinine, 1 grain of leptandra, and 1-4 grain of powdered capsicum. One of these was to be given five hours before the expected paroxysm. Two more were to be given after two-hour intervals; thus leaving one hour to elapse after the last capsule and before the first chill. This course was to be repeated every day, or on alternate days, at the same hours, if there was any recurrence of the chill. There was no severe chill after the first day, and on the fifth day he was able to go about his work for a short time. Later, this patient was completely restored, without any other treatment.

This is my own experience in my entire professional work in this direction, and I know of thousands of physicians who have adopted a similar course, and who almost invariably secure good results. The leptandra, so combined, seems greatly to facilitate the antiperiodic effect of the quinine and its destructive influence upon the plasmodium malariae.

Leptandra will materially benefit malarial fever of every kind, especially remittent fever. It is an excellent remedy to add to vegetable tonics, especially when malarial

conditions prevail. It improves the tone of the intestinal organs, increasing functional activity. I often have given it with small doses of wine or some mild stimulant, or together with the tincture of nux vomica, with excellent results. Its continued use produces dark-brown or black stools. It increases the flow of bile and, thus, is of material benefit in the treatment of jaundice. I think this remedy is underestimated and believe the profession could well prescribe it much more extensively.

Chionanthus

The liquid representatives of *chionanthus virginica*, or fringe-tree, are prepared from the bark of the root. I cannot understand why this remedy has not come into more general use by the entire profession. I am sure that my experience with *chionanthus* in jaundice of every form has been confirmed by many other prescribers. Certain it is that there has been no case of jaundice, whatever its cause, in which I have not seen some little effect from it, while I have cured so many cases of simple obstruction of the ducts and of functional disorders of the liver, and had so very few failures, that I am convinced that, if there ever is to be a specific for jaundice, we shall find it in *chionanthus*.

Specific Symptomatology

The first indication for *chionanthus* is jaundice. The symptoms which induce this disease will suggest this remedy. It seems to exercise its best influence upon the liver when that organ is in a state of acute congestion, with imperfect discharge of the bile, or in those cases where there is simple catarrh of the bile-duct. However, I should not hesitate to give it, whatever the character of the disease; expecting more or less beneficial influence even in as hopeless cases as cancer of the liver. I have always gone on the principle that, no matter how incurable as to its ultimate outcome a disease may be, it is our duty to prescribe those remedies to which the indications plainly point, and thus give the patient the full benefit of every moment of relief from any one symptom that can possibly be secured. By carrying out this program rigidly, I am confident many patients have been cured who under other methods or other treatment certainly would have proven incurable.

Acute jaundice, with at first yellowishness of the conjunctivæ and subsequently of the skin, which also may become very deeply stained, and where there is pain in the

right side and acute colicky pains in the abdomen, is satisfactorily treated with chionanthus. As a curative remedy, this agent should be used early; and, while a cathartic effect should not be persisted in, this effect at the start may be desirable. Subsequently better results are secured by giving the remedy just short of any active cathartic action.

Chionanthus in Cholelithiasis

When this train of symptoms occurs, with evidences of the presence of gallstone—especially where there is gallstone colic—the entire experience of the highest authorities of the world has not produced a better course of treatment than the one to be outlined; this is a fact I have had proven by so many experiences in my life that I am convinced that the statement is true. This is my procedure:

If the jaundice appears prior to the pain caused by the expulsion of a calculus, give chionanthus at once. If on pressure there is soreness, also sharp, cutting pains, combine the chionanthus (even if the latter severe symptoms do not occur) with bryonia, 20 drops of a good preparation in 4 ounces of water, and give a teaspoonful every hour or two. In addition, place a hot-water-bag over the liver. When the pain sets in, administer a hypodermic injection of 30 or 40 minims of "hypodermic" lobelia, or lobeline sulphate. If immediate relief does not follow, give another hypodermic, this time 1 dram, of the lobelia an hour later. However, do not fail to give at the same time 1-2 dram of *dioscorea vilosa* in 1-2 teacupful of hot water. This latter dose may be repeated in thirty minutes.

Under this treatment, in less than two hours' time, without the aid of morphine or any other anodyne, in all but a very few cases complete relief will be experienced; and with the aid of appropriate vegetable hepatic remedies the patient may be tided over without an operation. Of course, accumulation of gallstones can be removed only with the knife. However, if an operation has to be performed, the patient should have proper treatment with the properly selected remedy of this group. I am confident that I have treated many cases in which under other circumstances an operation would have been considered necessary, but where the patients were permanently relieved by the persistent use of a course of treatment as here indicated.

As stated, chionanthus cures catarrh of the common gall-duct. It certainly liquefies the bile. It prevents the formation of calculi, and promotes the discharge of those

already formed, if not too large. While it will not cure those cases in which there is structural occlusion of the duct, or where there are impacted stones, or where there are foreign or malignant growths, it certainly will prove of benefit in these cases; and I am inclined to believe that, wherever an operation is necessary for any disease of the liver, a general tonic effect of this agent upon the structure of this organ will be exercised, given either before or subsequent to the operation.

Chionanthus quickly overcomes the jaundice of infancy and of childhood. Pregnant women should receive this remedy, as it will have a beneficial effect also upon the bile. In malarial conditions where there is lack of tone of the stomach, with inactive liver, it seems to affect the digestive apparatus favorably.

Quite a number of reliable physicians—among whom is Doctor A. P. Hauss of New Albany, Indiana—claim that chionanthus has a specific effect in certain forms of diabetes mellitus, especially those originating from functional disorders of the liver. In addition, Doctor Hauss asserts that he has never yet treated a case of diabetes mellitus in the manner indicated that has not yielded in some way. If no free biliary condition is present or if there is general atonicity, he gives 10 or 15 drops of fluid extract of chionanthus and perhaps 1 or 2 drops of tincture of *nux vomica* four times a day. He directs the patient to drink, each morning before breakfast, one to two pints of hot water containing a teaspoonful of magnesium sulphate. This reduces the glycosuria.

Other physicians have in large part confirmed the Doctor's confidence. The field is open to investigation as to the action of this remedy in diabetes, and I have no doubt that it will prove an exceedingly valuable auxiliary.

Other Uses for Chionanthus

In the conditions where there is want of activity in the liver cells, where there is extreme irritability and also persistent vomiting of bilious matter (as in dipsomania), this remedy acts beneficially. It prevents the formation of gallstones, and favors their expulsion when formed, thus preventing attacks of bilious colic.

Chionanthus is beneficial in the slow convalescence of protracted fevers in which malaria has been one of the causes. Given under these circumstances, we could extend its symptomatology beyond that given above, so as to include diffuse abdominal pain, pros-

tration, pain radiating from the liver to the umbilicus and associated with nausea, thin, light-colored, watery stools more or less tinged with green alvine matter, and sharp colicky pains within the abdomen, though usually without rise of temperature.

I am confident that chionanthus acts also upon the pancreatic glands and upon the spleen, and I think that to its influence upon the pancreas is due, to some extent, the fact that we secure such good results in the treatment of diabetes mellitus. Others of our observers prescribe this remedy where there is an inflammation of the duodenum causing obstruction of the bile-ducts; also, where there is a necessity for an intestinal antiseptic, when these organs are involved. They assert that the remedy increases the flow of the bile. They also say that it should be employed in chronic gastrointestinal disorders, especially if the glandular organs are in any way involved. In general atonicity of the tract, nuxvomica should be added. In other cases, the remedy is combined as the indications may suggest.

Iris Versicolor

Iris versicolor, in official parlance, designates the "root" (rhizome and rootlets) of the blue flag. The eclectics prepare an imperfect oleoresin, to which the (improper) name of iridin (also irisin) has been given. A concentration, representing all the medicinal virtues of the drug, is commercially known as irisoid. The action of this drug is not widely different from that of those previously mentioned. However, there are some diagnostic points, which enlarge this field materially, that must be observed. It has more of an influence upon other glandular organs, probably, than those considered above; and it should be called a glandular remedy. In some of its influences, it is comparable with iodine. It acts directly upon the thyroid gland. It stimulates the entire lymphatic system, as it also does the liver and the spleen. There is a certain sensation of fulness in the throat, a sensation as if the circulation were impeded, which is sometimes classed as the immediate field of action of iris.

I am inclined to think that we have not given this drug with sufficient freedom; I also believe that more of its physiological action should be obtained. It acts upon the salivary glands as well as upon those of the gastrointestinal tract, to a certain extent. Let me quote, as a general statement, a paragraph from Scudder's "Specific Medication:"

"Iris is a valuable remedy in glandular affections generally; in malarial poisoning with

involvement of the spleen and liver; in rheumatism; in catarrhal affections, especially in some cases of diarrhea and dysentery; in scrofulous cachexia, particularly in scorbutic females who have leucorrhea, dysmenorrhea, and so on. In syphilis, any stage, but more especially during its secondary and tertiary manifestations, iris is an admirable remedy. In cholera morbus and cholera infantum, it is decidedly beneficial, when given in small doses. In some cases of skin diseases—those in which other iris indications are prominent—it is a most satisfactory remedy. This is markedly true in some cases of eczema, psoriasis, and pustular disease of children. When the mouth is dry and saliva scanty, iris in fair-sized doses is efficient. Iris is recommended in prostatic troubles, and in seminal losses in cases in which there is marked debility, with mental complications."

I should say that the agent is indicated where there is a tendency to the same symptoms with regard to liver disorders as are named above; also in irritable conditions of the mucous membranes of the digestive tract, where the secretions are at fault. This condition is sometimes characterized by neuralgic pains over one eye or involving one side of the face. There is nausea. If vomiting be present, the fluids are intensely acid; there is a sensation of burning and distress in the stomach and in the esophagus; there is pain; sometimes there is regurgitation of food, especially after eating fats or pastry. If there be diarrhea and a burning sensation after the fecal passage, the concentration of iris is very successfully employed. Given in proper doses, it covers a number of intestinal disorders that seem to have their origin in the liver or other glandular structures; and, removing the cause of the difficulty, it contributes largely to the restoration of normal function and tone.

Indicated in Sick-Headache

Those patients who suffer periodically from sick-headache nearly always are benefited by the use of this agent. It ameliorates the attack and at the same time contributes to the removal of the cause as well as to the breaking up of the tendency to recurrence. In the treatment of disease of the thyroid gland or of syphilis, cancer or general tuberculosis or tuberculosis of any special organ, especially of the kidneys or the bones, it always proves helpful.

In that condition which once was known as the strumous diathesis, iris always has been very popular with the observers as one of

A COMPARISON OF THE ACTION OF LIVER REMEDIES

ACTION AND INDICATIONS	PODOPHYLLUM	LEPTANDRA	IRIS	CHIONANTHUS	CHELIDONIUM
LIVER	Active hepatic stimulant, inducing some secretion, free flow of bile. Stimulates the portal circulation, induces the entire glandular system to function normally, and with laxative, moderates on pressure, sharp, quick cutting pain under the scapula.	Tonic; mild but positive stimulant; increases liver secretions, without irritation; valuable in biliary disorders which induce hepatic hypertrophy; valuable in chronic hepatitis; hepatic congestion.	Mild efficient stimulant in general functional activity; valuable in chronic disease where dropsy results from liver disorder; valuable in biliary order; valuable in hepatitis from chronic hepatic hypertrophy.	Direct stimulant in hepatic congestion, with hypersecretion; when the portal circulation is engorged; liquefaction of calculi; prevents formation of calculi; indicated by fullness of the liver; indicated by pain in the liver; especially indicated by acute pain from obstruction of the gall-bladder.	Acts mildly upon the liver; especially when the spleen is involved; overcomes biliary atony; indicated by throbbing massive pain in the right hypochondrium; indicated by pain in the right scapula; redness of the skin which depends upon hepatic irritation.
STOMACH	Produces vomiting in overdoses; is a gastric irritant; stimulates the portal circulation; is valuable for this influence, in small doses.	Mild stomach tonic; restores appetite; improves digestion; induces vomiting and nausea when due to atony.	Induces no irritation, rather soothes irritation; controls vomiting and regurgitation; induces secretion of acids; beneficial in achlorhydria.	In overdoses, induces nausea and vomiting, so met in a violent manner; in proper doses, a mild, soothing stomach tonic.	A mild stomach tonic, improving digestion. No specific action on the stomach.
INTESTINAL TRACT	Emetogenic; induces griping action; improves intestinal glandular action; indicated in chronic constipation, with hard clay-colored, dry stools. Bowels loaded and bloated; deficient action; indicated by flatulency, with mild intestinal colic; abdominal plethora.	Induces mild cathartic action. Improves intestinal function for improving the function of all intestinal glands; acts freely upon the small intestine. In proper doses, produces no irritation.	Increases intestinal glandular action; soothes intestinal irritation; improves the function of the unilobes; relieves hyperstasis; is valuable also in duodenal catarrh, with constipation and clay-colored stools; indicated in splenic engorgement.	Produces but little, if any, intestinal irritation, influences the mucous-glands of the intestinal tract. Indicated in constipation with hard stools; some colic, or when the feces are whitish or clay-colored, or in cholera or choleraic diarrhoea, with green discharges.	Indicated in intestinal disorders, with marked atony, when there is no vomiting. Beneficial in mild constipation, with chronic glandular inactivity, especially if there is edema of the bowels.
TONGUE INDICATIONS	Tongue heavily coated, uniformly yellowish or yellow central; thick dirty coat, especially at the base; tongue pale and flabby.	Tongue pale, coated uniformly white or grayish-white, and moist; bitter taste in the mouth.	Is indicated when the tongue is narrow-pointed, somewhat red, with thin edges, especially yellowish at the center with a yellowish coat; increases salivary secretion.	Tongue flabby, broad, coated white or yellowish, edges indented.	Tongue flabby, full and broad, pale, irregularly coated, mucous membrane pale, free mucus secretion.
BRAIN INDICATIONS	Dull headache; vertigo; uncertain gait; vision fails; patient dull, sluggish, listless, flabby.	Frontal headache from disordered stomach; general dull headache, with confusion of vision; vertigo; some restlessness; some restlessness; sleeplessness.	Exceedingly valuable in sick-headache from gastric acidity; relieves vertigo, with above indications.	Patient dull or fretful, often inclined to sleep, especially after eating, sleep heavy and not restful, with troubled dreams.	Indicated in persistent fullness of the cerebral circulation from liver faults; in bilious headache, vertigo, and gastric disorders, also in supraorbital neuralgia.
CIRCULATION INDICATIONS	Pulse full, large, sluggish, and oppressed; capillary circulation fails; fullness of superficial veins; cool; oppressed heart action, occasionally irregular or intermittent pulse.	Improves circulation in the mucous membranes; relieves palpitation and irregular heart action; induces to stomach and liver disorders.	Relieves functional heart irregularity, and palpitation from gastric and intestinal disorders; valuable in heart disorders accompanying fever or exophthalmic goiter; relieves bilious headaches.	Acts directly upon the venous circulation; indicated when there is slight excess of venous blood in some days, with hectic flushes.	Impeded capillary circulation of the mucous membranes, depending upon general plethora.
SKIN INDICATIONS	Skin of a dingy hue, dull, soggy, and not when the skin is dry and flaky; eruptions, urticarial, eczematous, or pustular; conjunctivæ dingy, yellowish; eyes dull.	Indicated when the skin is dry and flaky, but not when the skin is moist; skin yellowish or dingy, but warm; conjunctivæ injected and yellowish.	Stimulates elimination; improves secretion, improves skin coloration; relieves skin troubles depending on gastrointestinal disorders.	Skin dingy, yellowish, warm, with cool extremities; skin irregular, conjunctivæ dingy.	Skin pallid or sallow, flabby, cool, occasionally tinged yellowish; skin disorders depending on imperfect elimination.

the essential remedies. In its ability to remove waste and to overcome morbid tendency toward autointoxication, it will be found of value.

There are cases of eczema which are treated better with iris than with any other remedy, I think. It sometimes is used in these cases externally as well as internally. Where there is persistent oozing from the skin, from 5 to 10 drops of a concentrated fluid preparation may be given every two or three hours, or, the proper dose of iridin. Prurigo and psoriasis have been treated successfully with it. In the treatment of goiter, many cases yield most readily, but it is beneficial to a limited extent in all cases. I have treated exophthalmic goiter with combinations in which this agent was a part, with good results.

Chelidonium

Chelidonium is commonly known as the greatcelandin. While my own experience with this remedy is limited, a few observers have dwelt upon it as being exceedingly efficacious. I quote in full from the writings of Doctor Bloyer, who has been a very close observer of the action of these hepatic drugs. He writes:

"In the chelidonium-case, the tongue and mucous membranes are full, pale, sallow, soggy. The tongue may have a dull, leaden-colored fur upon its surface; the skin is pale, dull, leaden, sallow, even greenish; there are full hypochondriac regions, especially the right; the abdomen is tumid; the feces are light-colored and sometimes frothy, occasionally scybalous; the urine is pale and cloudy and usually of high specific gravity, sometimes offensive in odor.

"The chelidonium-patient is apathetic, heavy, lethargic, indolent; he complains of a bitter taste in the mouth, of prostration; he is inclined to lie down, is sleepy, and describes a numbness or tingling in the back or through the shoulders and the hepatic region. His pains are ascribed to the liver: they are dull, heavy, tensive, tearing; occasionally

they are located under the right scapula or near the dorsal spines. The chelidonium-patient frequently has bilious headache, liver-cough, and so on."

Specific Symptomatology

The conditions to which chelidonium are especially applicable are found in those cases where the skin is sallow and pale; where the tongue is thick and fills the mouth, as it were; where it is pale and sallow and the mucous membranes are pale, all pointing to abdominal plethora, inefficient functional action of the glandular organs of the abdominal cavity, and imperfect sluggish circulation both of the tissues, glands, and organs. Indications do not point to any evidences of actual absorption of the bile into the blood, necessarily; nevertheless, these evidences confirm the other symptomatology, especially if there be dark-green and fetid stools—although, in fact, its action often is needed where the stools are clay-colored or very light-yellow; and where the urine, which contains bile, is dark-yellow or reddish and very acid, containing an excess of uric-acid crystals.

In that class of cases where, owing to liver disorders, there is a slow pulse, frequent palpitation, a feeling of weight in the limbs or stiffness and swelling of the extremities, which are cold; where the skin is pallid and doughy or where there is edema, this is counted an important remedy to prevent biliary calculi. Iris has been in use for this purpose for many years, but reliable evidence, confirming such action, necessarily is scanty.

A foreign author at one time recommended this remedy very strongly for the treatment of cancer, giving it in very large doses internally, and injecting it into the structure of the cancer itself; but of late years little has been observed to confirm such action, and it has fallen into neglect.

I am producing herewith a tabulated presentation of the action of the five remedies just discussed, which may assist somewhat in an understanding of their influence.



The Treatment of Urethral Stricture

For the Help of the General Practitioner

By WILLIAM J. ROBINSON, M. D., New York City

Editor of "The Critic and Guide" and "The American Journal of Urology;" author of "Never-Told Tales," "Sexual Problems of Today," "Sexual Impotence," etc.

STRICTURE is a narrowing or constriction of the caliber of the urethral canal at some point or points. As the urethra is ordinarily a closed canal, dilating only for the passage of urine, semen and instruments, it would be more correct to define stricture as a loss of, or diminished, dilatibility of the canal.

Strictures generally are divided into spasmodic, inflammatory, and organic. It is only to the latter kind that the name stricture should be applied.

Forms of Stricture, and the Causes

A spasmodic stricture is really but a spasm of the compressor urethræ muscle and should be referred to as a spasm of the muscle or a spasmodic constriction. Inflammation itself rarely, if ever, produces a definite constriction of the urethral lumen, definite enough, for instance, to cause retention of urine. An inflammation superadded to a previous organic stricture may cause complete retention, but then it is wrong to refer to it as an inflammatory stricture. It is merely an organic stricture which has become inflamed. The entirely different methods of treatment of spasmodic and of organic strictures shows that spasmodic stricture does not deserve the name of stricture.

Inasmuch as spasmodic stricture is of little importance pathologically, I shall devote but little space to it, paying special attention to organic stricture, and particularly to organic stricture of gonorrheal origin.

Strictures are not met with nowadays with the same frequency that they used to be in former days. This is both because there is less neglect on the part of patients in treating themselves for gonorrheal affections and because our treatment is more rational and more scientific than it used to be. But even now they are of greater frequency than they should be, and a stricture occurring in a patient who has been under a physician's treatment right along is a direct reproach to that physician. It shows that the treatment either was insufficient or incorrect; for, while we can not prevent epididymitis in every one of our gonorrheal patients, while we can not prevent

prostatitis in every one of our cases, yet, stricture can be, and should be, prevented every time. We can not prevent the migration of the gonococci into various glands and neighboring organs, once they have invaded the submucous tissue of the urethral canal, but we can prevent the forming of connective tissue in every instance.

Organic stricture is a narrowing of the urethra, owing to the formation of bands of connective tissue in the mucous and submucous layers of the canal. This may be due to trauma (wound, injury)—such strictures being called traumatic—or to inflammation of the urethra. Of these inflammations, the most common one is gonorrhea. While a stricture may be produced by a nongonorrheal urethritis, still, it is so rare as to be virtually negligible. In fact, all possible causes of stricture pale into insignificance in comparison with the one great cause, namely, gonorrhea, which is the etiologic factor in about 80 or 85 percent of all urethral strictures.

Varieties of Stricture

A stricture that permits the passage of a No. 22 (French) bougie or sound is referred to as a stricture of wide caliber. Those that are so narrow that they will not permit the passing of a No. 22 or 20 (French) sound are spoken of as strictures of narrow caliber. A stricture that will permit the passage of only a filiform bougie is spoken of as a filiform stricture. A stricture that does not permit the passage of even a filiform sound is spoken of as an impermeable stricture, and such a one causes complete retention of urine. Strictures which are dilatible by sounds but immediately return to their former caliber, are referred to as resilient strictures.

Strictures may be single; but this happens rarely, except when of traumatic origin. When of gonorrheal origin, they generally are multiple. As a rule, two or three strictures are found in the same urethra; in exceptional cases, we may find as many as fifteen or twenty. Narrow strictures (imagine a thread tied around the urethra) are spoken of as linear; broader strictures (imagine a tape tied

around the urethra) are referred to as annular, ringlike. Multiple strictures, or broad annular strictures in which the lumen, instead of being in the center, is in the side of the constriction, and in which the entire passage becomes tortuous, are spoken of as tortuous strictures.

Strictures with which the general practitioner has to deal are fortunately most commonly located in the anterior urethra. Traumatic strictures generally are situated in the membranous urethra. There are no strictures—or so seldom as to be entirely negligible—in the prostatic urethra.

Symptomatology of Urethral Stricture

A stricture of wide caliber, or even of a somewhat narrow caliber, may present no symptoms of which the patient is aware. A patient may have a stricture for ten or more years without knowing it or without paying any attention to it, when suddenly, after a debauch or sexual excess or a cold, he is taken with complete retention of urine, and applies to the physician, the latter thereupon discovering a stricture of apparently many years' standing.

But as a rule strictures do cause symptoms. One of the commonest ones is the well-known gleet, which consists in a slight urethral discharge. The discharge is generally supposed to be most common in the morning; but this is so only because during the night the patient passes the longest time without urinating and in consequence the discharge can accumulate in sufficient amount to be noticed. But if the patient should abstain from urinating during the day for eight or nine hours we shall be sure to find the discharge then too. In fact, I have had a number of patients in whom the discharge in the morning was extremely scanty, so that it could be noticed or squeezed out only with difficulty, while toward evening, after the day's work, it was much more abundant.

The same thing was also true of shreds in the urine. While as a rule the shreds are much more numerous in the morning, this is only because of the longer time passed without urinating. And, just as the discharge may be more abundant in the evening, so the morning urine may virtually be free from shreds; while the evening urine, if the patient has abstained for several hours from urinating, may be full of them.

While a person may have gleet without a stricture, still, stricture is its most common cause, and in every case of obstinate gleet that refuses to heal under ordinary injections

we should suspect stricture; and in the vast majority of cases examination will disclose it.

The next symptom is, a change in the size and character of the urinary stream. It is this that often brings the patient to the doctor. Besides being smaller in size than usual, the stream may assume a fantastic direction, going either to one side or downward, or become corkscrew-shaped, or—a very common occurrence—it splits in two or three different directions.

Then, almost invariably there is dribbling of the urine. The final contraction of the vesicourethral musculature is insufficient to drive out the last drops of the urine, owing to the obstruction met on the way, and they, therefore, dribble away simply by the action of gravity. Very often this little urine does not dribble away entirely, but remains, some in front, some in back of the stricture, thereby keeping up a low grade of inflammation.

Having to overcome an obstacle during each act of urination, the musculature of the neck of the bladder becomes hypertrophied, and, as is true for all unnaturally hypertrophied muscle, it becomes weakened. There is developed a low-grade inflammation of the neck of the bladder, besides more or less cystitis; and this increases the frequency of micturition—this being another important symptom of long-standing stricture. The patient may have to urinate every hour or every half hour during the day and several times during the night. The pain sometimes is slight, but may become so excruciating that the patient will double up.

In long-neglected stricture, there may be hypertrophy of the bladder-walls, well-developed cystitis, pyelonephrosis, pyelitis, and so on, but these are remote effects of stricture, and we are here concerned only with gonorrheal strictures as such.

Then, finally, there may obtain complete retention, with extravasation or infiltration of the urine, and also various fistulæ.

The sexual symptoms of stricture are important, because they are frequent, annoying, and often overshadow the urinary symptoms caused by the stricture. These symptoms are: weakened or imperfect erections, premature ejaculation, diminished voluptas during the act, a feeling of scalding or burning in the urethral canal during and after the ejaculation of the semen, and, occasionally, a disturbance in ejaculation. Regarding the latter, the semen either may fail to discharge outwardly at all, running back into the bladder, or it oozes out slowly after the erection has subsided. As a rule, there is a

diminished desire for intercourse, but occasionally, as so often happens in the inflammations around the posterior urethra and the prostate gland, there may be just enough inflammation to keep up an irritation that makes the patient believe that he is constantly erotically excited. This is a fictitious libido. In irritable stricture, pollutions occur frequently, also; and it quite often is here that we have to deal with retropollutions, or, ejaculation of the semen into the bladder.

Treatment by Means of Mechanical Dilatation

The treatment of stricture is mechanical as well as operative. The general practitioner seldom will have to have recourse to the operative method, as we can accomplish as good results, in the vast majority of strictures, by mechanical dilating.

Dilatation is performed by means of silk-woven bougies, steel sounds, and the various several-branched dilators. For strictures not admitting any more than a No. 12 or 15 (French) instrument, we use silk-woven bougies, because a very thin steel sound is apt to make a false passage. But for strictures above No. 15 lumen, we use steel sounds or dilators.

The greatest gentleness must be exercised in introducing a sound. Very much damage—aggravation of the inflammation, chills, septic infection, false passages, severe hemorrhages—has been caused, and is being caused, by physicians with too heavy a hand or who are too much in a hurry to accomplish results.

To introduce a sound properly, wash the glans and the meatus well with a 1 : 5000 mercury-bichloride solution, irrigate the portion anterior to the stricture with a 2-percent boric-acid solution, and, if you see the patient for the first time or you know that he is of a nervous disposition, instil in the neighborhood of the stricture a few drops of a 4-percent solution of cocaine or alypin and a few drops of a 1 : 1000 adrenalin solution. This latter measure not only takes away the pain to a great extent, but also makes the lumen of the constricted urethra larger and more patent, by removing the inflammatory swelling. Then lubricate the bougie (or, if it is a sound, pass it first through a flame, which sterilizes and warms it at the same time, then lubricate it with a sterile lubricant, oil being the best) and introduce it gently through the stricture.

Do not try to force the passage too much. Slight force is permissible, but not enough force to tear or divulse the stricture. Sometimes by waiting for a few moments, resting the tip of

the sound at the opening of the constriction, a stricture which seemed to be absolutely impermeable will yield and permit the passing of the sound. This not only is true of spasmodic but also of genuine organic strictures, because most of them do possess a slight amount of dilatability.

After having introduced the sound, let it remain for five or ten minutes. I believe that passing the sound and taking it right out again is not sufficient. It is not only the momentary dilatation of the stricture that does good, but the more or less prolonged contact of the stricture-walls with the steel sound that produces the absorption of the scar tissue.

Always be sure to have the patient take a dose of 10 grains of hexamethylenamine about an hour before he comes to the office, and also 10 grains afterward. Many a case of infection and of urethral chills is avoided thereby.

The sounds may be introduced once every two or three days, while at each visit we may employ a larger-sized sound. It will be found that very often when we are unable to pass a larger-sized sound, we shall be able to do so if we first pass one of smaller size. In other words, suppose on Monday we pass a 24-size sound; if on Wednesday, we try to pass a 25- or 26-size sound, we may not be able to do so; but, if we pass again a 24-size sound, leave it in for a moment, then remove it and take a 25- or 26-size sound, the latter will enter easily. In this way, we continue the introduction of the sounds until we can pass easily a No. 30 or 32. Higher we need not go.

When we have reached the maximum, we may order the patient to come every two weeks or every month for an examination, so we can see whether the stricture has begun to recontract; and it is also a very good idea now to teach the patient to pass the sound himself. If he is intelligent and can be taught to use common sense and proceed aseptically, we can trust him to pass the sound once a month or once in two months and in this way avoid the danger of his stricture recontracting.

As to Dilators

The dilators introduced by Kollmann and Oberlander present a great advantage over the steel sounds, for they may be passed through a meatus as small as size 21 and then be dilated in the urethra to any extent we wish.

As most of the strictures that the general practitioner has to deal with are in the

anterior urethra, it is the anterior, or straight, dilator that he will have to use mostly.

The thin rubber sheath accompanying the dilators is slipped over the instrument, which thereupon is stretched to its full capacity in order to make sure of the integrity of the sheath. After it is closed again, it is lubricated with a sterile medium, then introduced into the urethra and dilated to the desired extent. The indicator on the dilator shows just the degree of dilatation. At each sitting the instrument may be dilated to two or three divisions higher.

There also are dilators on the market which can be used without rubber sheaths.

After the removal of the sound or the dilator, it is well to instil in the neighborhood of the stricture, a few drops of a 1-2-percent silver-nitrate solution, which acts both as an antiseptic and as a "healing" agent.

The Technic of Meatotomy

Some urethral meati are so small that they will not permit even the passage of a dilator. Such meati must be cut before we can expect to do anything with the stricture. While there are on the market numerous meatotomes invented by surgeons anxious to be immortalized by giving their name to an instrument, or by enterprising manufacturers, they are all superfluous. All that is necessary is a blunt-pointed bistoury.

Wash the glans and the meatus thoroughly with a 1 : 5000 mercury-bichloride solution. If you are very particular, irrigate the anterior urethra for about two inches with the same solution, or swab it out with a cotton swab saturated with it, and then insert into the meatus a bit of cotton dipped in a cocaine or alpin-adrenalin solution. Or, instead of the cotton, just a half grain of cocaine powder or crystals may be deposited on the floor of the meatus and about 5 drops of adrenalin, 1 : 1000, dropped in. After about three minutes, the floor of the meatus will seem to have become blanched.

You now introduce the bistoury and cut exactly in the median line on the floor of the urethra as far as you wish to have it cut. Supporting the floor of the meatus with one finger of the left hand will tell you just exactly whether and how far to cut. After cutting, pass a short anterior sound, to make sure that you have cut sufficiently. It is better to cut a little more than a little less, because there will be some recontraction upon healing. If

cut exactly in the median line, there will be very little bleeding. If there is an abundant hemorrhage, compress the urethra *laterally* for several minutes or put a bandage around the glans, and the hemorrhage will stop.

Before sending the patient home, take a piece of a wooden applicator or a toothpick, wrap some absorbent cotton well around it, dip it in a 1 : 1000 adrenalin solution, and insert it in the meatus. The patient removes it at the next urination.

Never cut on the roof of the urethra, as I have seen more than one physician do. It only cuts the glans without actually dividing the constriction, which is on the floor of the urethra.

Some meati have a tendency to reunite unless prevented from doing so, and this is prevented by passing a short steel sound several times a day, and by inserting between urinations a bit of cotton smeared with borated petrolatum.

When the little meatotomy wound is healed or about healed, then we begin with the introduction of sounds or dilators.

While the meatus should be cut sufficiently large to admit a No. 24 or 26 (French) sound, I see no reason for cutting it, as some do, to No. 32 or 34 size. There was an excuse for doing it before the introduction of dilators. It was necessary, in order to permit us to pass a No. 32 or 34 sound. But now, when we have the dilators with a caliber of 21 to 23 (French), it is not necessary to cut the meatus to much more than that. The excuse that the physician does not possess a Kollmann dilator and has only sounds, is not a valid one. He should purchase one. The patient's urethra must not be slashed merely because the physician does not possess a necessary instrument.

I am opposed to excessive meatotomies, not on purely sentimental or esthetic grounds, but because, in my opinion, they result in interference with proper urination, and quite possibly also with proper intercourse. When water issues from a tube of a narrow caliber but with a wide opening, it will splash, and people with excessively cut meati do not pass a uniform, strong stream of urine. I have had the impression that excessively cut meati are also a cause of premature ejaculation. I am, therefore, opposed to cutting the meatus to a size larger than No. 24 or 26. With our present dilators at command, it is unnecessary; and it may be injurious.

The Letters of Doctor Leonidas Playfair

Addressed to a Young Man Just Entering Practice

By A. H. P. LEUF, M. D., Philadelphia, Pennsylvania

EDITORIAL NOTE:—The difficulties of the young doctor! How many they are and how mountain-like they seem to the youngster; and how small and inconsequential they appear to us older fellows compared with the burdens we are bearing. However, let us give the boy a lift. He needs encouragement. Old Doctor Playfair understands the problems and aspirations of youth and can speak for us all.

LETTER III. OFFICE HOURS

MY DEAR FRIEND: Pursuant to my promise in my last letter concerning office hours, I shall make that topic the main subject of this letter. First, however, let me express the hope that you have fully recovered from your late indisposition. I assume that your silence is not occasioned by a continuance of your trouble or its exacerbation, but that it is due, rather, to a proper activity on your part in securing office fittings, and—may I hope it—attending a patient—or several. But to the point.

One of the most important things that a young physician has to take into consideration is that of office hours. Practice divides itself into two parts: that which is done in the office of the doctor, and that done at the house of his patient.

Office work should be the more perfect, because here the physician ought to be surrounded with all the facilities for doing his best, which is seldom possible at the house of the patient, for self-evident reasons. Office work is the best kind in which a physician can be engaged. It is not so great a strain upon his vitality, consumes much less time, and is more remunerative despite the smaller fee. Encourage patients to come to the office rather than to ask you to visit them.

It is better to begin this way. The young doctor is too liable to be afraid to take a decided stand in matters of this kind. But, if he does not learn to insist upon having his convenience considered as much as possible at the very beginning of his career, he will find it increasingly difficult to do so as he becomes more busy.

Another important advantage of office practice over outside work consists in the fact that it may be continued long after you are too old and decrepit for the arduous work of visiting patients; and this applies with equal force to disabilities brought on by other causes than old age. One of the most pitiable sights in the profession is, to see the very old doctor, who has done so much incalculable

good during his time, still compelled to endure the drudgery of general practice for the eking out of a mere existence.

This has always seemed to me a reflection upon his intelligence and business sense rather than a tribute to his greatness of heart. It is so very easy, as well as inexpensive, to credit all such with noble impulses, with generosity, and with all the other good traits that might be enumerated, when that is the only compensation granted them for the good they have done. It is cheap praise, succeeding oftener in paying doctors' bills than is supposed, but it is not convertible by him into a single one of the many things he needs for his comfort or existence.

For this reason, it is important for the doctor to be business-like from the very beginning of his career. He is either worth something to his patients or he is not. If he is, he should exact fair compensation for his services. If he is not, he should do one of two things, either become qualified or take up some other line of work.

The Early Office Hour

To return again to the subject of office hours. I should say that, as office work is the most important part of the doctor's labor, not only to himself but to his patients as well, it is desirable that he should arrange his office hours with this end in view.

First of all, he should consider carefully the strain upon his own vitality of the kind of practice in which he is about to engage. He should also take into consideration the habits of the community in which he lives, and particularly of that class that is likely to employ him at the beginning of his career—usually wage-earners, who form the bulk of our population. These people begin work early, and continue, as a rule, for from nine to eleven hours, one of these being devoted to the noonday meal. Evidently, a morning office hour is of no use to them, unless they are too ill to work and, yet, not enough so to be compelled to remain at home. But this

is not so with many. It is different with their wives and children. They can come in the forenoon, and should be induced to do so; mainly for the purpose of leaving an evening office hour free for those who are unable to come at another time.

The morning office hour should be regulated so that housewives can get some of their work done at home before going out, and, yet, so that they may return in time to begin the preparation of the noonday meal. Then, again, the doctor is obliged to take into consideration his own breakfast time, and allow himself an adequate interval between the conclusion of this meal and the beginning of his morning hour. This is for the purpose of enabling him to approach his work in the forenoon without undue haste, and in prime mental and physical condition to meet the trials and tribulations incident to his labors.

The Evening Office Hour

In the selection of an evening office hour, he should consider the time of his own evening meal, together with later evening engagements of any kind to which he may be bound. One of the most important of the latter is time for quiet study. Another consists in engagements of a purely social kind, in which every individual indulges more or less if of normal temperament. Then there are the medical-society meetings or the symposiums of several select friends, professional or otherwise.

Inasmuch as most wage-earners quit work at 6 o'clock, the evening hour should begin after this time. Yet, not so long after but that it may end in time to enable the physician to meet promptly the customary evening engagements. I say "promptly" with the utmost deliberation, for there is hardly anything that helps so much to inspire confidence in anyone's reliability as the reputation of being punctual.

Let me caution you against practicing the common childish deception of pretending to be so busy that it is impossible for you to be on time. If you are so busy, those who know you are bound to be aware of the fact, and your entire manner will certainly indicate it; for an active, energetic life leaves its unmistakable traces upon those who are subject to it. If you are not a busy man, those who know you will be aware of that fact too, and no puerile pretense will succeed in hoodwinking them. The necessarily evident result of such an attempt is to make you ridiculous, and this is fatal because it cheapens you.

On the other hand, if you are doing so well

that, though you are not busy neither are you idle, you are making a living, provided you are businesslike. It is then not necessary to dissemble, for you are advancing and, with proper and legitimate care of your own affairs and attention to business, sure to develop these so that you soon will be busy. In other words, *never be a fraud*; for it is neither honest nor necessary, besides being positively harmful, both by injuring you in your own estimation and degrading you in that of others.

To return again to the evening office hour. As most individuals work till 6 o'clock and evening functions usually begin at 8, at many of which it is expected that everyone shall be present promptly at the hour appointed, your evening office hour should begin and end within this period. Consequently, I should suggest that the evening hour, in large cities especially, run from 6:30 to 7:30 p. m. The objection may be that the hour is too short, or that it begins too soon, or that it ends too early, to which I reply, however, that 6:30 p. m. is not too early for many people, while 7:30 p. m. is late enough for nearly everybody. For such as may find it impossible to come to you within this time, it is an easy matter to extend your hour as may be mutually agreeable. With such an arrangement, you will almost always know when you are going to be late and can say so in advance, or you can change your special engagement, if that is convenient.

Insistence Upon Schedule Time

When very busy, you will find more people enter your waiting-room within this single hour than can be seen in so short a time, a condition of affairs much to be hoped for, and for which you should be thankful when it arrives. Though they may take up your time till 9 o'clock, you have no ground for objection so long as they all come within your hour, but I should vigorously and, if necessary, peremptorily discourage the arrival of patients after office hours, except by special appointment. My reason for this admonition is, that, if you do not interdict practice of this kind, you will find patients coming to your office an hour or an hour and a half after the end of your regular office hour, presuming upon your being made busy by preceding comers, and because they are not willing to wait their turn. This makes it impossible for you to foretell when you are going to be done with your evening work, and, therefore, at what time you can be present elsewhere or be able to begin some other labor.

It is better, even in the earlier years of practice, when one is not so busy, to get into the habit of refusing to see people who come after the end of the fixed office hour. Of course, it is not wise to do this in an objectionable manner. It will not do to have late patients told that you are in but refuse to see them. They never would forgive you for doing that; and you cannot afford to get into their bad graces, particularly early in practice. It is better to avoid them by being away from your office. Leave within a few minutes of the end of your office hour and do not return for an hour or more later. That enables those at home to say truthfully that you are not at home to see the patient, that you seldom are at home immediately after an office hour, and that the only time to see you there with any certainty is at the time fixed by yourself for this purpose.

To concentrate your work during an office hour, it sometimes is advisable merely to specify the beginning of the hour at which you are ready to begin to see patients, as, say, 8 o'clock, when your hours are from 8 to 9. It is also well, after getting busy, to have a sign conspicuously placed in your waiting-room, to the effect that there are no consultations outside of office hours except by special appointment. To this may be added a companion sign stating that you cannot agree always to make visits upon the same day when the call is made after you leave your office in the morning. While rigidity in these matters undoubtedly is costly at times, it is the only wise, and the most profitable, course in the end.

Never fail to keep your office hours, for it is unpardonable for you almost to bully your patients into coming at a time set by yourself and then not be there to meet them.

Afternoon Office Hours

In regard to afternoon office hours, I have only to say that they are bad for the general practitioner; and I hardly can see where they are of much use even to the specialist, although I recognize the fact that many wealthy people, particularly women, are in the habit of retiring—I was going to say, late at night, but it is more accurate to say, early in the morning, and arising at about noon. Of course, if they visit you soon after breakfast, it will be some time in the fore part of the afternoon, as they have their breakfast in the middle of the day.

These people constitute desirable patients, because they can more readily afford to pay a large fee than most people can spare a smaller

one. However, if your work has been so good as to attract them, they are anxious enough to see you to come during your office hour. There is nothing to prevent them from coming at any time except their own indolence—a trait that it is not your business to encourage, but which it rather is your duty to end if you can.

Those of your patients who are deserving of the greatest consideration are the ones who can least afford to pay you for your work, those whom the interests of life compel to drudge along during the better part of the waking-hours to eke out a mere existence. These are the people who will help you to live, who will make your living pleasanter, who will appreciate what you do for them, and who cannot see you except at the hour suggested without making an undue sacrifice. I should, therefore, say that the wealthy need not concern you so far as arranging your office hours are concerned. Should they, however, insist upon seeing you at a particular time, this may be arranged, but only in consideration of a special fee.

It is also well to bear in mind, in the arrangement of office hours, that it is the steady pace and worry that kill. The practicing physician needs periods of rest as well as do all other individuals. There is no time so appropriate to begin doing this as at the beginning of your career. Just as workmen and business men have their days off once a week, which by common practice is Sunday, so would I also suggest that you select that day for your day of rest, to which may also be added all legal holidays.

Few will begrudge you this respite, and there are many who will place it to your credit, on the assumption that you are religiously inclined, because you have no office hours on Sunday. For the reason that a physician is blamed for many things that are not his fault, it is excusable to reap the benefit of this interpretation, whether merited or not. You need not, therefore, enlighten those who mistakenly—should it so happen—attribute your refusal to work on a Sunday to religious motives. As you grow busier, a time will come when a Sunday rest will be as welcome as it will be impossible to get should you have neglected to make this arrangement earlier in your practice, for it is exceedingly difficult to break up an established habit that you have helped your patients to form.

When you finally become very busy, you will, provided you are an attentive collector, be able to secure whatever help may be neces-

sary to lighten your labors and save a corresponding amount of time. There are few people so situated that they cannot see a doctor some time during the week, but for the few who cannot you may make special arrangements for Sundays and the holidays on which you have no office hour.

Were you located in the country, I should lay less stress upon the subject of office hours, for there your outside work would necessarily make the control of your time more uncertain. You would have greater distances to travel, and you would often have to make a longer stay than with a like case in the city, because you could not so promptly return. You would have to go over your patient very carefully at each visit, and leave explicit instructions as to what to look for and what to do until your return.

If at all busy, the country practitioner cannot see distant patients oftener than once in twenty-four hours. In sparsely settled districts he can see them only at intervals of several days, there being no other nearby physician, and the attendants must be thoroughly instructed in the mysteries of the craft according to the needs of the patients and their ability to absorb instruction. Until your next visit, you leave the sufferer in the hands of fate.

To such a man, office hours are an abstraction—an etherialization. At best, the doc-

tor's time in country practice is so cut up and uncertain, because of the wide distribution of his patients, and poor traveling facilities, that he is never sure of his time at home. Yet even for him, a morning and evening hour is the best, somewhere near his corresponding meal hours. His office callers will patiently wait until he finishes his meals, for life goes more leisurely in the country, and time is less valued than it is in the city.

It is also well to bear in mind that a short office hour concentrates your work. Patients come closer together, are more apt to see one another, and are more likely to be imbued with the idea that you are in demand than if the same number were distributed over twice the time or a longer period.

After having equipped your office, and fixed upon your hours, you are ready to begin work in earnest. The question then arises whether you should supply the medicines you wish your patients to have, or let the pharmacist do this on your prescription. That is a most important matter, and requires rather lengthy discussion, on which account I shall not take it up now, but will defer it to my next letter, in which I shall consider it from every side. Meanwhile, believe me, with sincerest well wishes,

Your true friend,

LEONIDAS PLAYFAIR.

GIFTS

If with pleasure you are viewing any work some man is doing,

If you like him or you love him, tell him now.
Don't withhold your approbation, 'till the Parson makes oration,

As he lies with snowy lilies o'er his brow;
For no matter how you shout it, he won't really care about it,

He won't know how many tear-drops you have shed;

If you think some praise is due him, now's the time to "slip it to him,"

For he cannot read his tombstone when he's dead.

More than fame and more than money, is the comment kind and funny,

Or the hearty warm approval of a friend.
For it gives to life a savor and it makes you stronger, braver,

And it gives you heart and spirit to the end;
If he earns your praise, bestow it, if you like him let him know it,

Let the words of true encouragement be said,
Do not wait 'till life is over, and he's underneath the clover,

For he cannot read his tombstone when he's dead.

Then the joy of rightful living is not always in the giving

Of the costly gifts which break your pocket flat.
But a word of cheer when spoken is often just the token

That will mean far more than gifts. There's truth in that.

Just take out the streak of yellow, don't condemn the other fellow

If his views of life don't gibe with what you've said;

Just remember he's our brother in this world as in the other,

For he cannot read his tombstone when he's dead.

The Action of Sparteine

A Reply to Dr. Leslie B. Wiggs

By GEORGE E. PETTEY, M. D., Memphis, Tennessee

WHEN there is difference of opinion between authors or clinical observers as to the physiological effects of any remedy, it is not always easy to determine which opinion is the correct one; for the reason that the human system is a very complex organism, and, while a remedy may be known to make a certain therapeutic impression, still, its effect may not be such on any vital organ as to make it easy or even possible to measure instrumentally and verify that effect. However, that is not true of all of our therapeutic agents.

Sparteine is one as to the effects of which no difference of opinion should exist, yet in the works on therapeutics the widest difference of opinion is expressed both as to its efficacy and its physiological action.

In making a study of the subject some years ago, the writer came to the conclusion that these differences of opinion arose mainly from a misunderstanding of the size of the dose. The adult dose was stated by different authors at from 1-10 grain to 2 grains, but a majority of the writers placed the dose at 1-5 of a grain or less. It was found that virtually all of those who held to the fractional-grain doses expressed little confidence in the remedy; in fact, most of them held it to be of questionable value, if not inert.

On the other hand, those who placed the dose at from 1 to 2 grains expressed great confidence in its efficacy both as a heart tonic and diuretic.

Among those holding the latter opinion was Bartholow, who said that "it above all other remedies deserved to be classed as a heart tonic."

About twenty years ago, this statement of Bartholow's attracted the writer's attention, and the use of sparteine, in 2-grain doses, was then begun.

For a few years, the remedy was used empirically with more or less indefinitely defined purpose; but, the author's work becoming such as to demand frequent use of the most dependable heart tonic available, an independent study of remedies reputed to be cardiac tonics was undertaken. This resulted in the selection of sparteine as the

remedy which met the requirements most fully and which was most free from untoward or objectionable effects.

Some writers class sparteine with digitalis and attribute to it similar effects on the circulatory system; but this is an error. While sparteine exerts equally as tonic an effect on the heart-muscle as does digitalis, its influence on the arterial system, especially on the arterial capillaries, is directly the reverse—digitalis being a vasoconstrictor and sparteine a vasodilator.

About eight years ago, the writer published the conclusions reached by him in his study of sparteine, which were as follows:

"Sparteine, in medicinal doses, is practically a nontoxic drug.

"The effective therapeutic dose is 2 grains, and that quantity is required at intervals of four to six hours to establish and maintain the full physiological effects of the remedy.

"It is a reliable, nonirritating diuretic, suitable for hypodermic use.

"It is our most prompt and most dependable cardiac tonic, and one which is free from objectionable by-effects. It adds tone to the heart-muscle and increases the force of its action, while at the same time, by dilating the arterial capillaries, it reduces the resistance against which the heart is called upon to propel the blood. It is a true heart tonic."

The Experiments of Doctor Wiggs

Recently Dr. Leslie Byron Wiggs,* as a result of the laboratory study of the action of sparteine on the hearts of *frogs* and *dogs*, has announced conclusions differing radically from the above, as well as from the views held by a large number of competent clinicians who have made extensive use of sparteine in the treatment of diseases.

Doctor Wiggs says: "To answer the assertion of various authors who state 'that they have proven to their satisfaction the value of sparteine in clinical practice,' it was determined to see how far this could be proven in the laboratory."

As the result of these experiments, he reached the conclusion that sparteine "depresses the cardiac action," that it "markedly

*Read before the Tri-State Medical Society of Mississippi, Arkansas and Tennessee at Memphis, November, 1914.

*The Old Dominion Journal of Medicine and Surgery, May, 1914

diminishes the heart tone," and that it has "no diuretic action."

As these conclusions were reached by laboratory experiments on frogs and dogs, it seems to the writer that, in justice to himself as well as to those who might be influenced by his conclusions, the Doctor should have said that "sparteine has no diuretic action" on dogs. Had he stated his conclusion as to the diuretic action of sparteine thus accurately, his finding doubtless would have been accepted as final. When, however, he makes the broad and unqualified assertion as applying to human beings, we cannot allow the statement to pass unchallenged.

Inconclusive Value of Animal-Experiments

Too many careful and competent clinicians have observed the diuretic action of sparteine to allow a few laboratory experiments on the lower animals to shake their confidence in facts to which their own senses bear witness.

Notwithstanding Doctor Wiggs's conclusions, the writer, from abundant clinical ex-

Case No. 1. Miss Mober M.C. Age 16. Normal Condition.



Tracing 1. Oct. 21st, 12:30 P.M. Pulse 74, Blood Pressure, Systolic 110, Diastolic 85. Pulse Pressure 25.



Tracing No. 2. Oct. 21st, 2:30 P.M. Normal condition, confirming No. 1. Taken during digestion. B.P. Sys. 115, Dias. 90, P. 25. 2:30 P.M. Gave 2 grains Sparteine by mouth.



Tracing No. 3. Taken 5 P.M. 2 1/2 hours after giving 2 grains Sparteine by mouth. Pulse 86, B.P. Sys. 107, Dias. 80, P. 20.



Tracing No. 4. Taken 8:30 P.M. 6 1/2 hours after taking 2 gr. Sparteine by mouth. Pulse 80, B.P. Sys. 110, Dias. 90, P. 20 Taken during digestion.

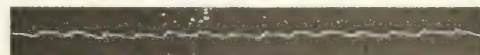
perience, still insists that sparteine, when administered to a human being, acts as a diuretic. Whether it has or has not diuretic action on dogs, he does not pretend to say. However, it is not with this part of Doctor Wiggs's article that this paper is intended to deal, but rather with that part relating to the effect of sparteine on the cardiac function.

Doctor Wiggs asserts that "sparteine depresses the cardiac function, causing a diminution in the tone," and that, "from experimental evidence, it therefore seems that the proper classification of sparteine is along with gelseminine and conine, and that in conditions of failing heart-power the administration of sparteine is contraindicated." Further: "If recovery takes place in these conditions

after the administration of sparteine, it is probable that the good result came not through beneficial influence of the drug, but rather in spite of its harmful action."



Tracing No. 1. Oct. 16th, 10:00 A.M. Normal condition. Pulse 60, B.P. Sys. 94, Dias. 76, P. 20.



Tracing No. 2. Confirming No. 1, taken 10:00 A.M. Oct. 16th. Pulse 64, B.P. Sys. 98, Dias. 78, P. 23. Normal condition. Immediately after taking this record 2 gr. Sparteine was given by mouth.



Tracing No. 3. Taken 12:30 P.M. Oct. 16th 2 1/2 hours after giving two grains Sparteine by mouth. Pulse 60, B.P. Sys. 96, Dias. 78, P. 22. 2:30 P.M. Gave another 2 gr. more of sparteine.



Tracing No. 4. Taken Oct. 16th 5:00 P.M. 7 hours after the first and three hours after the second 2 gr. dose of Sparteine. Pulse 72, B.P. Sys. 100, Dias. 78, P. 22.

The writer does not wish to be understood as denying the value of experiments on the lower animals in studying the action of drugs, for, in many instances such experiments have furnished a reliable index to their

Case No. 3. Miss O. Age 18.



Tracing No. 1. Taken at 8:00 P.M. Normal condition, Pulse 74, B.P. Sys. 100, Dias. 65, P. 35. Gave 2 gr. Sparteine by mouth.



Tracing No. 2. Taken at 8:45 P.M. 3 1/2 hours after giving 2 gr. Sparteine by mouth. Pulse 72, B.P. Sys. 96, Dias. 72, P. 24.

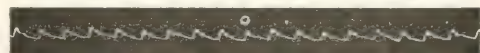
action on man; still, there are too many exceptions to this general rule for us to accept the result of such experiments as final. The crucial test, after all, is the administration of the remedy to man.

In studying a remedy such as the one in question, there seems to be no good reason

Case No. 4. Miss O. Age 18.



Tracing No. 1. Normal condition. Taken at 2:00 P.M. Pulse 70, B.P. Sys. 110, Dias. 85, P. 25. Gave 2 Grs. Sparteine by mouth.



Tracing No. 2. Taken at 5:00 P.M. 3 hours after giving 2 gr. Sparteine by mouth. Pulse 72, B.P. Sys. 107, Dias. 88, P. 22.



Tracing No. 3. Taken at 8:30 P.M. 6 1/2 hours after giving 2 Grs. Sparteine by mouth. Pulse 76, B.P. Sys. 110, Dias. 85, P. 25. Supper at 7:00 P.M.

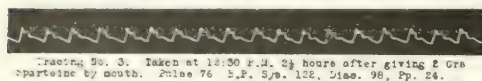
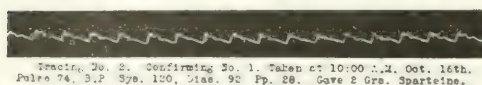
for introducing an element of uncertainty into the equation by using lower animals instead of human subjects as clinical material—since the latter can be had in abundance. The

writer has utilized the human instead of the animal subject.

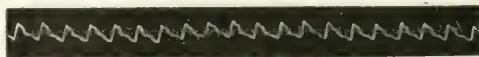
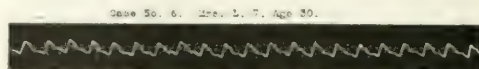
While the writer has had abundant experience in the use of sparteine in the treatment of disease and does not feel that he could now be mistaken as to its effects when administered to persons in a pathological condition, he has not had occasion to study its action on normal individuals; but, since Doctor Wiggs calls in question the generally accepted teach-

The above record, which can be readily verified by any competent observer who will take the trouble to do it, makes it clear that sparteine *not only does not depress the cardiac*

Case No. 6. Mre. C.A.T. Age 40.



ing with reference to its action, the writer has made a study of the action of the remedy on the cardiac function of normal individuals, and he presents herewith the record of such study.



muscle of a human being, but, on the contrary, it acts as a positive and powerful tonic to it.

Taking the findings of Doctor Wiggs as to the effect of sparteine on the cardiac function of frogs and dogs as a criterion, it is evident that the effect of this drug on man and animals is not the same, in fact, that the one is directly the opposite of the other. This seems to call for greater caution on the part of laboratory workers in announcing conclusions based alone upon animal experimentation. Such conclusions should not be announced as ultimate truth until they have been verified by actual tests on man.

Cosmetic Surgery

By RALPH ST. J. PERRY, M. D., Minneapolis, Minnesota

EDITORIAL NOTE.—This article is the first of a series upon the topic of "Cosmetic Surgery," which Doctor Perry is preparing with special thought to the interests of the general practitioner. These papers promise to be of exceptional interest.

A SHORT time ago, in a conversation with a physician, I chanced to remark that I was doing considerable cosmetic surgery. Said he, "What is cosmetic surgery?"—a question which covers the attitude of many members of the profession.

Cosmetic surgery includes the treatment, removal, repair, and restoration of disfigurements, deformities, and defects of the face, neck, bust, hands, and feet; being a combination of dermatology and orthopedics applied to the visible parts of the body, and involving so much of internal medicine, gynecology, and rectal and genitourinary surgery as may, through reflex influences, affect the skin. From this definition, it can be seen that no tyro in medical or surgical work or any "mushroom" specialist who lacks experience in general practice, can successfully cope with the many and varied problems presented to the cosmetic surgeon.

As a matter of fact, it is surprising that there should be such a widespread indifference in the medical profession concerning this branch of surgery; for, in every city there are those who aspire to be beautiful or who would gladly be rid of some disfigurement that mortifies them or which acts as a drawback in business affairs. And because of their inability to get relief at home they hic themselves to the advertising "specialist," who, oftener than not, is not properly qualified for the work or perhaps resorts to makeshift methods that produce merely temporary results.

This love of the beautiful, and the desire to attain it, dates back to prehistoric times, and our earliest medical and religious literature contains frequent references to cosmetic procedures and surgical operations intended to beautify by remedying some disfigurement. Centuries before our Christian era, the oriental surgeons were rebuilding and restoring cutoff



noses. Celsus has told us how to cover up unsightly scars; Taglicozzi created a furor by duplicating in Bologna the rhinoplastic work of the orientals. During the years of the Dark Age, it seems that many minor infractions of the law were punished by slitting or cutting off the nose or ears, hence, the demand for the reparative operation.

And yet, in spite of the demands of the people and in spite of the antiquity of this calling, the attitude of many of the medical profession is that of tolerance or even ridicule, largely owing, I believe, to an incredible and lamentable sciolism. Because of this attitude, many men have hesitated to announce themselves as cosmetic surgeons, so that the field has been left largely to the adventurous advertising gentry. Pick up the Sunday edition of almost any metropolitan newspaper, and you will find from one to twenty advertisements similar to the one reproduced in this article. These advertisers draw many of their patients from our territory—mine and yours—because the general practitioner or the specialist in major surgery considers cosmetic work too insignificant to take notice of. In my card index I have this day listed 534 conditions calling for cosmetic operations, and every week or two a new one is added.

When one looks back three or four centuries and sees the wonderful results accomplished by surgeons who were innocent of anatomical knowledge, who knew naught of antiseptic and aseptic methods, who worked with crude instruments and material, and under most adverse general conditions, one cannot help but hope for better results, in view of all of our anatomical learning, our aseptic technic, our delicate instruments, excellent material, and propitious surroundings.

What Cosmetic Surgery May Accomplish

The object sought in any cosmetic operation is, the elimination of a disfigurement, deformity or defect. The success of the operation depends upon the following factors:

1. The anatomy of the parts involved.
2. The cause of the disfigurement or deformity; whether congenital, or following disease or traumatism.
3. The nature and condition of the tissues involved.
4. The general health of the patient.
5. The skill of the surgeon.
6. The conditions influencing recovery.
7. The willingness, patience, and endurance of the patient.

Inasmuch as the cosmetic effect is purely a matter of surface—external or visible results—the minute topographical anatomy of the parts comes into consideration. The surgeon must know the various lines, furrows and

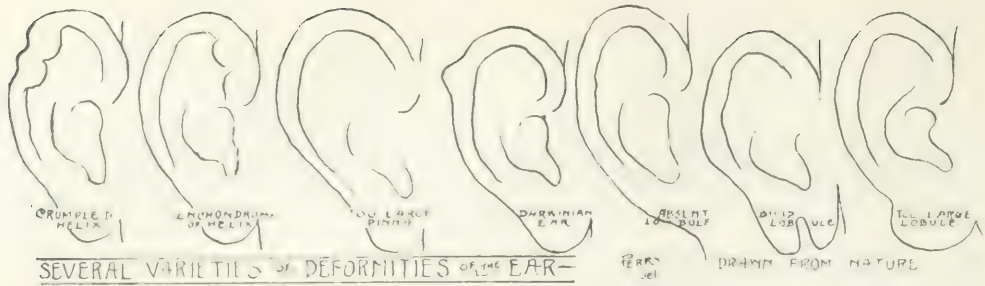


ATTRACTIVE FEATURES

No matter who you are, what you are, and whatever your calling or station in life, you will be happier by making the best of your looks. Whether by inheritance or birth, or as a result of indiscretion or accident, human being has the right to life with deformities and relations, and stren-

wrinkles, the rugæ, prominences and eminences, the muscular action which causes them, the cutaneous conditions which permit of their formation and the osseous and cartilaginous foundations thereof. Normal lines and furrows are useful in hiding scars following incisions; abnormal ones are to be prevented or removed.

Coupled with this anatomical lore, should be a knowledge of the pathology of the tissues, if any, and the ability of the tissues to respond to surgical encouragement toward repair and reconstruction; and, if these tissues are incapable of operating in harmony with the surgeon, then to what extent can they be eliminated and others substituted for them.



Thus, we see that in addition to a knowledge of anatomy, physiology, histology, and pathology the cosmetic surgeon must be familiar with the principles and practice of subcutaneous and plastic surgery and tissue grafting, and with those chemical and therapeutic agents which will destroy or build up certain tissues. All instruments and materials employed should be such as will leave the smallest possible trace of their use. The surgeon should have a "mechanical knack" that will aid in the devising and application of impromptu methods and appliances to meet emergencies or peculiar conditions encountered in individual cases.

How to Get the Knowledge

Some of this knowledge can be acquired from the text books and works of reference in vogue, but no one volume contains it all, or even half, for the bulk of it is so widely scattered through our literature that it is quite a task to collect it. The operative work calls for dexterity and a well-developed sense of form and size, the ability to secure perfect coaptation and to secure union by first intention. Tissues are to be handled as little as possible, and then with the greatest gentleness; for bruising, crushing, and pinching are fatal to cosmetic results. Hemorrhage must be prevented as much as possible and all coapted surfaces cleansed of clots, for extravasated blood offers a site for infection, followed by a destructive supuration.

Singularly enough, one of the greatest obstacles to success in cosmetic work is the patient, who is most anxious for a successful result but whose anxiety gives rise to a decidedly detrimental impatience and curiosity; whose hopes, built high but weak, cannot withstand the shock of an incomplete first operation; whose stamina is such that a failure to secure an immediate result brings on a complete collapse of courage. For these reasons, it is always best that the patient have a preoperative understanding, as to just what procedures may probably be necessary

and just what adverse ones are possible—even if not probable.

Now let me call attention to some of the possibilities of cosmetic surgery.

Some of the More Obvious Possibilities

Probably the most conspicuous feature of the face is the nose, and here we find many conditions which can be remedied by the cosmetic-surgeon's art.

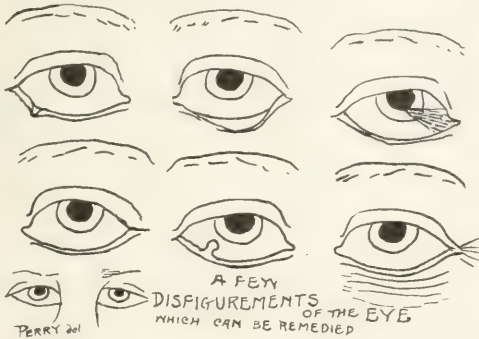
Deviations from the median line, either partial or of the entire organ, may be the result of disease or of trauma, and as a rule are easily corrected by operations performed either within the nose or subcutaneously, and, thus, leave no scars. There also are unsightly variations in the linear contour of the nose, such as the concave, or "saddleback," or "swaybacked"; the spatulated; the "baseball," or "pugilist's" broken nose; the convex, or Roman (which has been designated by many cognomens), the turned-up, *retroussé*, or "snub" nose; the turned-down, or "frog" nose; besides numerous other varieties. The nose may be unusually elongated or too much foreshortened; the tip may be bulbous, split or too sharply pointed; the entire organ may be too large, too small or may be absent entirely. All of these, and many more, unshapely or misshapen conditions can be remedied.

The ears frequently are the object of much solicitude because of their size, shape or relative position on the head.

Outstanding ears can be made to lie close to the head; a buckled or crumpled pinna can be straightened out, and auricles which are too large or unsightly in any part or as a whole are amenable to otoplastic procedures. Many persons who are the innocent possessors of ears showing marks of alleged degeneracy are anxious to have these stigmata removed, and their desires can be satisfied by any cosmetic surgeon.

Then there are the eyes, "the windows of the soul." These may suffer from internal or from external strabismus, from pterygium

or other kind of growth; there may be cicatricial contractions, eutropion or ectropion, or destruction of a part or all of an eyelid. The eyebrows may be deficient or defective; ptosis, epicanthus, ankyloblepharon, "crow's feet," "baggy" lids, asymmetry of the palpebral fissures, dacryocystitis, as well as other unsightly conditions may detract from one's beauty. All of the abnormalities just enumerated and many others, can be overcome by means of plastic methods.



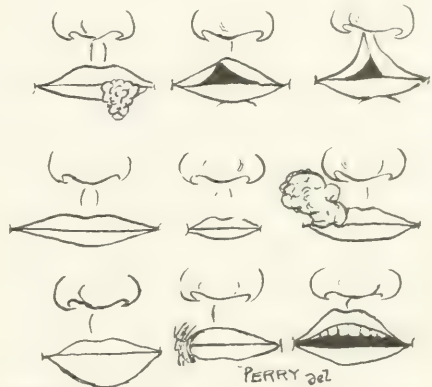
In the region of the mouth, we have hare-lip, thick lips, short upper lips, too full lips, the too small or too large mouth, clefts due to defects of fetal development, cicatricial contractions, and numerous other disfigurements. Within the oral cavity there are presented dozens of possibilities for cosmetic work along dental lines, prosthetic and otherwise. The tongue presents several conditions which detract from one's good looks or accentuate some idiosyncrasy, and which can be improved by treatment.

The hair, the forehead, the cheeks, the chin, and the neck are all subject to anomalies and abnormalities offering opportunities to the cosmetician. The feminine bust has, for many a moon, been exploited by the advertising fraternity as a most beautiful field for development. And, while their results have been more auriferous (to the benevolent promoters) than areolar and adipose, there is no doubt but that by proper methods the defective, deformed, deficient or diseased breast can be made to take on most attractive features. The arms and hands frequently present disfigurements which it is desirable to

have removed, such as scars, tattoos and birth-marks, tumor growths, cicatrices and webbed and contractured fingers. In the performing of amputations of fingers, much can be done to render the resulting mutilations less conspicuous by following the suggestions laid down by the author in a series of articles published in this magazine in 1910-1911.

While the nether extremities generally are hidden from the public gaze, there are a few pedal afflictions, such as bunions and club foot, for example, which are obvious even through shoe-leather; besides others—corns, hammer-toe, painful calluses, and so on—which cause ungainly alteration of the gait.

This category of cosmetic possibilities might be prolonged indefinitely, but it hardly is necessary, for you can find many cases within your own knowledge where some patient, friend or relative has some defect, deformity or disfigurement that could be removed or corrected. A suggestion to these individuals may cause them to seek relief, for most of them are ignorant of what can be done to



DEFORMED, DISEASED and DEFECTIVE MOUTHS
AMENABLE TO COSMETIC SURGERY

improve their appearance, and only a few are so indifferent as not to care about their appearance.

The details of the treatment of these many afflictions will be left to other articles that will follow.

801 Pillsbury Building.

(To be continued)



Cavia Cobaya: Medical Martyr

The Guinea-Pig, and What We Owe Him

By B. G. R. WILLIAMS, M. D., Paris, Illinois

Director, The Wabash Valley Medical Laboratory; Author of "Laboratory Methods for the General Practitioner."

EDITORIAL NOTE.—It gives us great pleasure to announce that Doctor Williams has promised us, for early publication, a new series of articles to be entitled: "Lens, Reagent, & Company, Detectives." We hope to print the first of these in our March issue. They will be written in story form, but will be found as practical as they are interesting, while showing the value of the laboratory aids in diagnosis and treatment.

PIGS is pigs," but the guinea-pig is interesting for what he is not. He is not a pig and does not come from Guinea. Very little has been written upon the guinea-pig and his part in modern medicine, each worker being compelled to a certain extent to gain his knowledge of this little animal, his habits and his life's history, by experience. In our medical-laboratory work, we have made a number of observations which may prove interesting to almost every physician and useful to the few who in the future may come in practical contact with them.

Before you and I began the study of medicine, we had not heard of the guinea-pig. Even now, after talking and writing about him or working with him, we know but little more. The cavy, that is, the guinea-pig, is a rodent very closely related to the rabbit. He is believed to have been introduced from South America, more especially from the Guianas. His ancestors, like himself, are of 1001 different varieties; none of the tame varieties, though, may be found in the wild state. The latter—the wild ones—are all gray or brown, never colored; and their habits vary exceedingly from those of the domesticated guinea-pig. Inasmuch as colored guinea-pigs were brought to Europe upon the discovery of America, it is presumed that they came from some that had been domesticated by the native Indian tribes.

The Guinea-Pig's Lack of Intelligence

Perhaps a guinea-pig means right. But even with the close study I have given them, it is difficult for me to understand why the critters are so foolish. Asked the question, "Which has the most sense, a chicken or a guinea-pig," a breeder considered for a few puzzled moments and then replied, "Well, it isn't a question so much as to which has the most, as it is *which has the least*."

I agree. Stated algebraically, the amount of intelligence, quantity x , in a chicken may be expressed as zero. Quantity y , that of the guinea-pig, may be expressed as minus

1000. The brain of the guinea-pig cannot possibly contain neurones, but merely connective tissue, cicatricial at that. It is a creature of reflexes, a restless rat, a squealing and scurrying tissue-mass. A chicken will learn to eat out of your hand: a guinea-pig always mistrusts you. I raise chickens and guinea-pigs together, for the former do not hold against the latter their mental shortcomings. Any self-respecting hen will ignore a guinea-pig as she would a stone. Even young roosters and pullets learn the lesson early. Put a rat in a labyrinth and his food outside, and he will quickly work to it; very much more quickly the next time. With a guinea-pig, not so; if he reaches the food it will be by accident, nor will he gain anything by repeated practice.

What I shall have to say just now may have something to do with the property of inertia, upon which I shall dwell later. Many of these things may depend upon a peculiar error of refraction in the cavy, though I fail to find any information on this point. He appears to be able to see at a distance what escapes his vision under his nose. At any rate, when food is thrown to him he squeals and runs—runs in whatever direction he is headed. If the food lies in his path, he runs over it without paying the least heed to it. Then he stops, turns, squeals, then takes another scurrying flight. As he nears the dainty morsel, each flight becomes somewhat shorter. Finally he stops short at the food. A female will grunt contentedly and begin to nibble. A male, when associated with females, will continue to squeal for more food. But the impression is gained that he has found the food, not by the sense of sight, but by the olfactory or some other sense. And, yet, he can perceive a threatening movement from the distance.

A guinea-pig likes to have his back rubbed—that is, after you have forced him to have it rubbed. If you can succeed in catching and holding him in order to demonstrate the process, he may continue to lie still, apparently

enjoying it. Cease for a moment, and he is gone.

Next to the physician, the guinea-pig is nature's best example of inertia, not only with regard to the finding of food, but in many other life habits. Not only is this an inertia of motion, but of position. A guinea-pig hesitates to start on the run, but, once running, knows not when to stop. A young rooster approaches Mr. Pig with feathers on end. Pig nibbles contentedly and blinks at Mr. Rooster. Does he see him? Stage of hesitation? Mr. R. is puzzled, turns his head sideways and thinks it over. Feathers become more perpendicular. Nerves himself to peck. Pecks. Misses guinea-pig, who runs suddenly and keeps running for a goodly length of time. Finally stops as shortly.

Here we are criticizing the guinea-pig, while we physicians show some of the same characteristics. We may not squeal so loudly, not eat so voraciously, not breed quite so rapidly, but, we do show the property of inertia—slow to move into new ways of thinking; yet, once set agoing, we never know when and where to stop.

The Cavy Is a Great Coward

Does a guinea-pig show fear? He is not afraid of the devil himself. Yet, of all animals, the guinea-pig is the greatest coward. Again we may be dealing with a peculiar refractive error. Lie motionless upon the ground, and he will crawl over you. Place a motionless snake on the ground, and he will sleep in its coils. And, yet, a slightest movement near him terrifies him. There can, surely, be no mental anguish quite as great as that of the guinea-pig's picked up by the hand; and, it seems to me, it could scarcely be increased by any physical pain resulting from experimental work. Stroke him tenderly or pierce him with a needle, it is the same: squirming and kicking, eyes wide with fear. You have but to place him upon the ground to renew his friendship—a contented grunt and then a squeal for more eats. One old lady said that he is modest. He will keep out of your way when sweeping, but will eat up the broom if you leave it for five minutes. Perhaps that is modesty. At any rate, the guinea-pig fears action or motion, but not form.

We are referring to this eating-habit quite a little. The guinea-pig is one of those animals which refuse to go on a hunger-strike. In several years' association with the cavy, I have never caught one of them drinking or sleeping. The only times I have not caught

them eating was when there was nothing upon which to nibble. Corn, banana peel, carrots, and bread are his standbys, but he will eat almost anything. What he insists upon is, a varied diet. Leave four choice foods with him for a couple of days, and he will squeal for something different. He is not strong for potato peels and loathes turnips. It has been claimed that, when thrown into a snakes' cage to furnish them with food for the future, he will contentedly nibble the rattles off the reptiles, unless they hasten to devour him first. He is an impudent eater. The guinea-pig was classified by our negro janitor as "De animal wid dah powahful stomick." Even though the guinea-pig should breed rapidly, it costs so much to feed them that guinea-pig inoculations will always constitute a laboratory luxury.

Varieties of Guinea-Pig

We have said that there are 1001 different kinds of guinea-pigs, and these may be variously classified. As to the quality of their hair, we speak of the Peruvians or long-haired types; the Abyssinian or coarse-haired types; and the smooths. As a rule, the smooths are the ones used in laboratory work. The silky hair of the Peruvians may reach five inches in length, and sometimes it is done up on curling irons when specimens are to be exhibited. The hair of the Abyssinians may be almost as stiff as scrubbing-brush bristles and it is arranged in rosettes or whorls. The most beautiful of the types employed in experimental work are the pure white pigs with pink eyes. However, the interbreed pigs (cousin with cousin, etc.) appear to be stronger types. Their head is larger and they appear more stupid. The purer types resemble very much in appearance their putative wild ancestor, the "capabara," a South American rodent loving water and sometimes attaining a length of three feet. All members of the cavia family reach their full dimensions within eight months.

Several quaint habits have been charged to the guinea-pig; namely:

1. That his squeal is one of the first signs of spring, quite as reliable as the croaking of the frog.
2. That he is the most prolific of all mammals, one pair properly bred proving the parent stock of a thousand offspring in a year.
3. That when picked up by his tail his eyes will drop out of his head.
4. That he will scare away all rats and mice.
5. That he is good to eat.

Let us take the several statements.

Last April I prepared to investigate as to whether or not the squeal of the cavy might be taken as a sign of spring. I had waited long and in vain for the concert of the frogs. Fact of the matter was, I wanted to know whether it was time to trim my grape-vines. Approaching the pen, I heard a vigorous squealing and hastened to tell my wife that by scientific experiment and actual observation I had verified this point. To my surprise, she said: "Those pestiferous pigs have squealed all winter, as you would have known had you taken the trouble to care for them at least part of the time."

Is He Prolific?

The cavy is not extremely prolific, or else I have not come into contact with such varieties as breed rapidly. To breed, they must be kept quite dry and warm; but especially dry. Do not bathe your guinea-pigs. Sudden change of temperature is fatal. I do not usually get from 9 to 12 in a brood, but rather from 3 to 6. In some periods they may breed every six weeks. The young are born with eyes open and with hair.

The female cavy has but two teats, but these are worked overtime for the next five weeks, at which time the young are promptly weaned and the next brood puts in its appearance.

However, for some reason I have not observed this rapid proliferation to proceed for any great length of time. The parents go on a strike, which may be long and necessitates the securing of new males or a cutting down of the rations. So, this feature has held down my yearly output. I have not complained, however, since I have raised them for my own use only. This relative sterility has been offset somewhat by the

fact that the "children" begin to breed when ten months old.

When picked up by his tail, the eyes of the guinea-pig drop out, and he may be forced to search for a considerable time before he can find them and replace them in their orbits. Anyone who doubts this statement should demonstrate it to his own satisfaction.

The statement that the guinea-pig will scare away rats and mice appears to have no foundation in fact. Mice like to bed in his straw with him, and rats will quickly slay him if permitted to reside near him.

The guinea-pig has been regarded as unwholesome food. I have never eaten a guinea-pig. In some of the Spanish countries, they are eaten and regarded as an excellent dish. They are closely related to the rabbit and may be kept clean. Straw should be changed often and the pen kept dry. They may be isolated for a day or so before slaughtering them. As to American chefs, we refer their attention to recipes of Spanish cook-books, as *cavy en casserole*, *cavy capsicums* and *cavy aux fines herbes*. Those who eat pork or possum could not possibly criticize baked cavy and onions. I have always wanted to taste a cavy, but have never been able to prevail upon the female members of the family to dress and cook one.

The hair of the cavy, and especially of the smooth varieties, sheds almost every season. However, I am informed that the rough- and silky-haired cavies are an exception and are now being used by furriers.

Some of us may eat the cavy, some of us may wear him round our neck, and still others may overlook his imbecility and accept him as a pet. But most of us prize him for his bacteriological possibilities. Next month we shall consider some of the latter.

The Doctor's Horse

By NELSON S. MAYO, D. V. S., Chicago, Illinois

Secretary of the American Veterinary Medical Association

WHILE the automobile must hold the foremost place as a means of transportation for the physician, there are localities where and seasons of the year when the horse must be depended upon to take the doctor on his mission. In many mountainous regions the physician must climb the hills and ford the streams on a saddle-horse, carrying in his saddle-bags the medicines

and instruments necessary for the practice of his profession. Even in comparatively level regions there are seasons of mud and snowstorm when the horse must be used, even if the doctor is fortunate enough to own an automobile, so that in a country practice the horse still has a place.

In the selection of a driving horse, there is always the personal factor to be considered,

as in the selection of a wife; but in spite of this there are certain "good points" about a horse that all good horsemen and judges agree should be investigated carefully.

Thus, in selecting a horse, the first thing to be considered is the purpose for which it is to be used as well as the conditions under which the horse must work. If it is purchased for saddle purposes it is important that it be an easy-riding animal. In some regions the gaited horse is preferred. While there are objections to gaited horses, yet, under average conditions, such an animal is by far the most comfortable under the saddle. In deep snow or mud, gaited horses do not travel as well as do the walk, trot, and canter animals. A gaited horse with a good running walk is not only easy to ride but he will cover distance rapidly and easily.

In some cases a doctor may desire a "combination" horse, or one that can be ridden or driven as desired. Good combination horses are not common, but, as a rule, they are desirable animals to own. Where a trotting saddle-horse is desired, he should be given a good trial under the saddle, since there is great variation in the comfort of riding, some trotting horses being easy for the rider while others are very hard to ride. In a rough region where roads are heavy, a stronger, heavier horse is needed than where the roads are good.

In selecting a horse, it is desirable to get a nice-appearing animal of a dark color, for instance, dark-chestnut, black, brown or bay. A good sorrel is not objectionable, but its color is liable to fade during the summer. It is well to avoid white or light gray horses since their coats stain easily and the hair shows plainly on dark clothing when they are shedding their hair. Spotted horses or those of unusual or very striking colors should be avoided, as they are suggestive of patent-medicine venders or lightning-rod agents. A nice-looking, closely-built, strong-going, sensible horse with an outstanding individuality will meet the demand of the doctor for steady, consistent work and, barring accidents, should give many years of good service.

It is a decided advantage to have a horse that is known throughout the countryside

as well as in the town. Such a horse is a good advertisement, attracting attention and favorable comment, and it will bring many favors, since nearly everyone is glad to "give the road" to the doctor. Then, too, you know your horse and his peculiarities, and while the doctor is not supposed to have any unusual characteristics, if he does, his horse will soon become familiar with them also.

As Drummond says in "The Habitant":



A good type of all-around doctor's mare, with foal

An' w'en de cole rain was commence again
An' we're sittin' at home on some warm cornerre,
If we hear de buggy an' see de light
Tearin' along t'roo de black, black night,
We know right off dat's de ole Docteur!

An' he's smart horse sure, w'at he call "Faubourg,"
Ev'vy place on de Parish he know dem all,
An' you ought to see de nice way he go
For fear he's upsettin' upon de snow,
W'en old man's asleep on de cariole!

[Doctor Mayo has consented to prepare for CLINICAL MEDICINE a number of short articles regarding the care of the doctor's horse. He will answer any questions you may feel like asking about *your* favorite nag.—Ed.]

Diseases of the Alimentary Canal

By A. L. BENEDICT, A. M., M. D., Buffalo, New York

Editor of "The Buffalo Medical Journal"; Author of "Diet in Health and Disease," and "Golden Rules of Dietetics."

EDITORIAL NOTE.—This is the third paper in Doctor Benedict's series dealing with the diseases of the alimentary canal. We are sure that every reader of "Clinical Medicine" will be pleased to learn that this series will be continued for several months. Gastric disorders are always troublesome—difficult to diagnose correctly; not easy to treat successfully. In order that every reader may apply in the best way possible the principles laid down in these articles, we invite everyone to "fire in" the questions he wants answered.

Abnormalities of Gastric Secretion

IN ORDER to simplify the discussion and to put it upon the basis appropriate for the general practitioner, it has seemed best to sketch with a broad pencil, to omit details and even some qualifications necessary to give an absolutely correct idea of a certain minority of cases. In a downward direction, the secretory conditions encountered are as follows: hyperchlorhydria, euchlorhydria, hypochlorhydria, achlorhydria, achylia.

Hyperchlorhydria

Hyperchlorhydria may be defined as a condition in which, by titration, the stomach contents at the height of digestion (one hour after a light meal, such as a slice of bread and butter and a glassful of water; two hours after a meal with egg or meat and perhaps potato added; three hours after a hearty mixed meal) approach, equal or exceed the physiologic strength of undiluted gastric juice. This physiologic standard (not to mention quite recent investigations which tend to show a higher acidity) corresponds to 50 percent of a decinormal solution.

Normally, the dilution of gastric juice with food and drink of test meals or ordinary meals reduces this acidity to about half, or to 25 percent of a decinormal solution. Any stomach contents taken at the height of digestion that show a 50-percent acidity may be considered evidence of hyperchlorhydria, although extraction of practically pure gastric juice of the same acidity ordinarily would be considered normal.

If, however, pure gastric juice is found constantly, it indicates a secretory abnormality of the same general nature as hyperchlorhydria and by most authorities this would be considered to be owing always to the irritation of an ulcer.

The total acidity in hyperchlorhydria does not generally exceed 75 percent, but it may rise to 100 percent in rare cases. The total acidity of the hyperchlorhydric stomach-contents, on account of the inhibition of fermentation, is not, as a rule, very high. For in-

stance, with a hydrochloric acidity of 50 percent, the total mostly will be about 75 percent. The more hydrochloric acid, the less additional acidity of all kinds; so that, for a hydrochloric acidity of 80 percent, the total will be 90 or 100 percent.

It is difficult to assign the lower limit of hyperchlorhydria. Many authorities allow a very small margin beyond the normal or even consider anything over 25 percent as hyperchlorhydric.

Here, we must consider both degree of acidity and amount of contents. For instance, if, with a hydrochloric acidity of 30 percent, more chyme is extracted than the total bulk of the test meal, we may consider the case as one of hyperchlorhydria; while, if the contents are within the normal limit of 100 Cc. of residue plus secretion, after a bread-and-butter and water meal totaling 250 Cc., it is better to consider the secretion as within normal limits. Without such marked increase in bulk or a liquid state indicating marked secretion of gastric juice after most of the meal has passed the pylorus, the writer would scarcely use the term hyperchlorhydria, unless the hydrochloric acidity was at least 40 percent.

The figures set down should not be understood to mean actual percentage of acid, but percentages of decinormal solutions, the readings being made at the point at which dimethylamidoazobenzol changes from cherry-red to orange, no cherry-red remaining at the edge against the white porcelain dish. An additional change occurs for about 10 degrees further, as the alkaline decinormal solution is added, until a clear straw-yellow is reached. This further change probably is due to organic acids and by hydrochloric acid in organic combination. That free hydrochloric acid is not the cause, may readily be proved by control experiment.

To a second sample of filtered stomach contents, add decinormal alkali in the amount necessary to obtain the orange color with dimethyl, but without the last-mentioned indicator. Then apply the phloroglucin-

vanillin or, what acts in the same way, the sugar-resorcin reagent and heat. It will be found that we are just about at the limit of the free hydrochloric acid reaction, namely, the non-appearance of a crimson ring at the margin of the evaporating liquid.

The reason for dwelling on this point is, that a good many men have first of all set a rather low limit of hyperchlorhydria, say, 30 percent of acidity, and then have made their readings at the final straw-yellow point, so that they have included with hyperchlorhydria cases with a real hydrochloric acidity of only about 20 percent; which, if anything, is below the normal.

The practical critic will doubtless object, why trouble the general practitioner with this chemic discussion, requiring laboratory tests? Why not give a simple, clinical test that will enable a diagnosis to be made? Because, in the writer's experience, hyperchlorhydria absolutely can not be diagnosed except by chemic test.

With practice, one can determine whether there is a considerable amount of hydrochloric acid or some other acid in the stomach, by administering sodium bicarbonate in saturated solution one hour after a meal—or later—and auscultating the effervescence. But one cannot differentiate except between very little and considerable acidity, and also cannot differentiate between different kinds of acidity. If one has had considerable experience with this test, he may very readily exclude hyperchlorhydria and euchlorhydria and say that the stomach contents are low in acid and, after having demonstrated hyperchlorhydria, the test is very useful in keeping approximate track of the progress of the case on an antacid regimen, but it cannot, in a new case, be relied upon to make the primary diagnosis of hyperchlorhydria.

Everyone is familiar with the textbook and lecture description of the symptomatology of hyperchlorhydria: acid eructations or burning in the stomach occurring one hour and subsequently after a meal; and with the equally classic differential point from gastric ulcer, that the pain and burning of mere hyperchlorhydria are abated by taking food, while they are increased in the presence of ulcer.

There is some degree of truth in these statements. For instance, if a chemist or physician familiar with the taste of the ordinary organic acids of fermentation and of hydrochloric acid has an eructation of a sharp, clearly acid liquid, if he has been exposed to nervous strain, has a burning in the

stomach, and he knows that he is not subject to ordinary sour stomach from fermentation, he may be reasonably sure that he has an attack of hyperchlorhydria. The diagnosis is not strictly subjective; it is based on self-observed objective signs. The average patient, however, cannot be relied upon thus to discriminate and, even if the physician were willing to taste the eructation instead of testing it, it is present in too small amount for either purpose, besides being partly or completely neutralized by the saliva.

Hyperchlorhydria of considerable degree may exist without concomitant burning in the stomach. An ordinary organic sourness may cause burning, and this may be relieved, temporarily, by taking food. Hyperchlorhydria—actually demonstrated, and where there is no blood or other positive evidence of ulcer—may give rise to increased pain upon ingestion of food. Well-demonstrated ulcer does not always cause definite gastric pain; but, if it does, this pain may be relieved by taking food.

In short, the clinical symptomatology so long taught is absolutely unreliable. The most beautifully typical pictures of hyperchlorhydria without actual colic and jaundice, and with marked hypochlorhydria, may occur when there are gallstones; also in chronic appendicitis and a variety of other ailments.

Euchlorhydria

Euchlorhydria may be defined as the normal state of the gastric contents, with regard to hydrochloric secretion, and to lie between a decinormal acidity, as indicated by dimethyl-amidoazobenzol read at the orange point, of 30 and, say, 15. While, of course, not a functional disturbance, it is worth while to emphasize the fact that patients may complain of gastric symptoms although having a perfectly normal hydrochloric acidity, and, indeed, with the other chemic tests reacting normally.

These symptoms may be referred or they may result from motor conditions, sensory perversions of function or from actual gastric lesions not at the time or even generally interfering with the secretory function. Thus, for example, a patient, referred by a nervous specialist, was found perfectly normal as to physical and chemic examination; however, before further investigations could be carried out, he became despondent and committed suicide, apparently having been discouraged rather than encouraged by the favorable report. In females, the same condition has

been found, when there was nothing but movable kidney to account for the subjective symptoms.

Hypochlorhydria

Hypochlorhydria may be defined as that degree of gastric acidity ranging from below 15 percent down to complete absence of hydrochloric acid, as indicated by the negative reaction with dimethyl or phloroglucin-vanillin or sugar-resorcin, without the addition of alkali solution. If in all cases chemical tests were applied, this probably would be the commonest gastric condition observed in patients complaining in a general way of gastric symptoms. Hypochlorhydria is rather to be expected in inveterate tea-drinkers, in flabby elderly women and men, in those having chronic gastritis from hepatic sclerosis or other cause, in periods of nervous and physical depression from almost any cause; moreover, it probably occurs quite regularly in typhoid and other fevers, although here there is an obvious contraindication to exact methods of diagnosis.

As one's practice becomes more and more limited to major cases, hypochlorhydria becomes less common, and, *per contra*, hyperchlorhydria more common. So, too, as one gets away from the poorer, less-nourished and more exposed class and to those subject rather to dietetic excesses, lack of fatigue and exposure, and more prone to neurotic conditions, the same phenomenon is observed; and this probably accounts for somewhat inconsistent statements as to the relative frequency of the two contrasted conditions.

It should be remembered that, after a very hearty mixed meal, any appreciable amount of free hydrochloric acid may be considered as normal, or, at least, that a moderate failure in the amount of the acid found in excess of its organic combination is not very significant.

While, in the absence of quite marked stagnation of stomach contents or the ingestion of food already in a state of fermentation or impregnated with bacteria and

yeasts, any marked excess of hydrochloric acid tends to check fermentation, on the other hand, a lack of this acid predisposes to fermentation. Yet, be it because the food is comparatively sterile, or because of the lack of stimulation of the pylorus to tonic contraction by hydrochloric acid or because of some biologic inhibition of bacteria, it is by no means uncommon to find the existence of little fermentation even though hydrochloric acid is markedly deficient.

However, in the average case of well-marked hypochlorhydria, there is likely to be considerable fermentation, the total acidity of the stomach contents, by the phenolphthalein test being high (75, 100 or 125 percent), while the free hydrochloric acid amounts to only a few degrees. In such cases, there is the specific odor or chemic reaction of lactic, acetic, or other organic acids, considerable formation of carbon dioxide, the latter often producing a foam and leading to more or less belching. Here we have those clinical cases of acute sour stomach, often associated with sick-headache, or the chronic states in which the patient describes his stomach as a vinegar-factory.

Achlorhydria

There is some doubt as to whether the term achlorhydria should be applied to cases in which free hydrochloric acid is lacking, or only to those in which it has never been secreted at all. As a matter of convenience, the writer prefers to employ this term in the former sense, and to let it indicate merely an extreme, and limiting degree of hypochlorhydria.

If hydrochloric acid has been secreted at all, pepsinogen is activated into pepsin, combined hydrochloric acid is present, and upon adding hydrochloric acid to the gastric filtrate, it will digest pepsin. Also, the peptone or albumose test—a violet ring above a cool or only slightly warm alkaline copper solution—will be positive.

(To be continued)



What Others are Doing

EMETINE IN NONAMEBIC DYSENTERY, AND IN COLITIS

Certain observations have been made public of late which suggest that emetine may be valuable also in dysentery caused by other organisms than the *entamoeba histolytica*. Thus, for example, three cases of nontropical dysentery, where the stools contained spirochetes, but not amebas, were treated with emetine by Tribondeau. There was clinical recovery, the stools becoming of normal consistence within two or three days, although the spirochetes did not disappear from the stools. Bertrand (*Bull. d l'Acad. d Médecine*, April 14, 1914) also reports a case of dysentery, in which the stools contained both amebas and spirochetes, completely relieved by four subcutaneous 1-2-grain injections of emetine hydrochloride. In this instance, both the amebas and the spirochetes disappeared from the discharges.

Bertrand also has employed emetine in the treatment of chronic enterocolitis occurring in tropical countries, and reports that this remedy causes an astonishingly prompt improvement in the consistency of the stools, while at the same time reducing the number of daily evacuations.

Further, Tribondeau has found emetine useful also in the common mucomembranous colitis occurring in temperate zones. Here again it improves the character of the discharges, while reducing the amount of mucus secreted. Just how the drug acts in conditions of this kind is not speculated upon by the author; however, the results obtained certainly warrant its more general employment in this disease.

THE HEMOSTATIC ACTION OF EMETINE

Another illustration of the striking action of emetine, in arresting hemorrhage, has been reported by Palasne and Champeaux to Bertrand (*Bull. d l'Acad. d Méd.*, April, 14, 1914). In this case, there was vomiting of blood, owing to a duodenal ulcer. The bleeding was promptly arrested by a single hypodermic injection of 2-3 grain of emetine

hydrochloride. In a case of hemothorax, the result of a penetrating wound of the chest, the injection of 2-3 grain of the emetine, repeated once daily for six days, seemed to control the symptom.

Bertrand again points out the futility of trying to explain the hemostatic effect of emetine through circulatory depression, revulsion or induction of nausea. As yet no completely satisfactory means of explaining just why the emetine stops bleeding has been supplied by anyone; still, that it does do so, and that quickly, there is now an abundance of evidence to demonstrate.

GIVING QUININE IN MALARIA

In a very helpful paper upon the management of malarial fever, published in *Merck's Archives* for September, 1914 (p. 276), L. Sexton objects to overdosage with quinine. He avers that a dosage of more than 30 grains taken within the 24-hours period may prove toxic. He points out that 15 grains of the alkaloid yields a 1 : 5000 solution in the blood of the average patient, while twice that amount is quite sufficient to destroy all non-crescent plasmodia, provided it is given three days in succession. He asserts that the quinine acts better when given in two or three $7\frac{1}{2}$ to 10-grain doses, and preceding the expected chill time by three or four hours, so as to have the maximum saturation of the blood at the time the plasmodia are newly developed and most susceptible to the action of that agent.

Persons suffering from defective hearing or middle-ear disease, as also nervous, susceptible individuals, should receive the smallest quantity of quinine capable of destroying the parasites. There are some people who have a particular idiosyncrasy to this drug, and in them it may produce urticaria, or more often severe ringing in the ears. Such persons, Doctor Sexton says, should take the quinine in small doses or in combination with sodium bromide or phenacetin.

Our own suggestion would be that the physician will get best results from quinine hydrobromide. Not only is this salt very

soluble, and therefore very active, but it also is less prone to produce the disagreeable by-effects characteristic of quinine poisoning.

MORE ABOUT MASTISOL, THE BACTERICIDE, HAND-VARNISH, AND LIQUID PLASTER

In our February issue (p. 155) and in that for July (p. 620), there appeared paragraphs on the virtues of certain antiseptic varnishes for coating the hands of the surgeon, as a substitute for rubber gloves, the second one presenting a formula for a preparation imitating the proprietary mastisol (viz., finest mastic, Gm. 40; purest benzol, Gm. 60; castor-oil, gtt. 20). The favorable reports published about the last named preparation find corroboration at the hands of a military surgeon now serving in an Austria-Hungarian military hospital, Prof. Dr. A. Eiselsberg. This writer asserts (*Militärarzt*, No. 21, 1914) that in his present extensive experience he has found mastisol (the original) eminently satisfactory for the purposes recommended; however, still more gratifying have been the results with a varnish prepared for him which has this composition:

Mastic.....	Gm. 20
Resin (colophonium).....	Gm. 10
Turpentine (thick—not the oil!)..	Gm. 7
Benzol.....	Gm. 50

All ingredients must be of highest grade, of course.

For certain purposes, Eiselsberg objects to the use of ready-made adhesive plaster, the latter being prone to loosen after a length of time. In its place, he is using the foregoing varnish.

The manner of using is as follows: He paints the skin with the sticky liquid, waits a few minutes for the solvent to volatilize, then presses on the plain bandage; which thus becomes the adhesive plaster. In this way, he applies extension bandages for fractures of the limbs, shoulders, and the like.

IMPROVED METHOD FOR INFUSION OF DIGITALIS

For several years' Oigaard (Copenhagen) has been preparing infusion of digitalis from leaves specially preserved, and claims for his method superior results. (*Zeitbl. f. Herzkkr.; cf. Ther. d. Gegenw.*, July 1914). The reason why digitalis infusions are not reliable, he points out, is largely because the leaves are hygroscopic and, hence, deteriorate.

To obviate this drawback, Oigaard proceeds as follows:

Immediately after opening an original sealed container of standard titrated digitalis powder, he divides the batch up into doses of various size (such as are commonly prescribed), puts each powder into a separate small (dry!) glass tube, then seals the latter. These tubes are given to the patient, who is instructed to prepare the infusion freshly from one of these powders for each dose, by pouring on boiling water and letting stand fifteen minutes; or, respectively, to take one of the powders with a swallow of water.

Yet how much more simple and satisfactory to prescribe a pure digitalin or other glucosidal preparation of known strength. The water required can be swallowed *ad lib* according to the necessities of each individual case.

AS TO THE REAL NATURE OF SEPSIS

The phenomena of sepsis—blood poisoning—have been considered to depend upon the presence and multiplication of the pathogenic organism in the blood, and this view still generally prevails. However, proofs to the contrary are accumulating, and opposing views were voiced by at least two clinical investigators at the German Congress for Internal Medicine held April 20-24 last, as quoted in the *Wiener Medizinische Wochenschrift* for September 24, 1914. Inasmuch as the statements of these speakers—Schottmueller, of Hamburg, and Paessler, of Dresden—cover or supplement each other, they may be considered together.

Thus, then, the assertion is, disease-germs do enter the blood current, but they never proliferate there. Consequently, the salient feature of sepsis is not, as commonly assumed, the multiplication of the germs in the blood; rather, it is a nidus of the bacteria developed in some organ, and from thence the blood is being invaded again and again by fresh broods of the germs. Intensely explosive attacks may, possibly, constitute an exception. But in all chronic forms of sepsis, germs entering the circulation are very rapidly destroyed.

The reason why any germs may establish successfully given breeding-spots must be looked for in the fact that there circulation is poor and, hence, the bactericidal action of the blood cannot bear upon them.

The foregoing considerations explain why increase of the blood's bactericidal power or the introduction of specific protective agents (serums, vaccines, and chemicals) into the

current, broadly speaking, fails of satisfactory therapeutic results in combating septic conditions. (Diphtheria and tetanus must be excluded; while salvarsan appears to have been effective in anthrax.) Hence, mercury bichloride and silver preparations fail of their purpose. Antifebriles cannot be considered as specifics; they merely alleviate the symptoms.

In a general way, treatment must be directed toward conserving vitality by improving the nutrition; Schottmueller advocates intravenous injections of solutions of salt or of grape-sugar; or to administer these as enemas. Alcohol he rejects. Real results, however, according to the same authority, have been obtained only by operative means; even where the infective nidus was situated in the interior (this including puerperal fever and otitic infection). Removal of the tonsils, according to these gentlemen, does not come under this rule, for reasons which are not very clear.

This is a surgical viewpoint regarding sepsis, and the methods of treatment suggested seem both reasonable and sound. However, it is not always possible to remove each nidus of disease, and to aid the body in the effort to destroy the "fresh broods of germs" seems a logical method of treatment. A remedy that naturally suggests itself is nuclein, given to increase the number of those defenders of the body, the leucocytes; and the nuclein may well be employed in association with an appropriate bacterin.

NONOPERATIVE TREATMENT OF TUBERCULOUS GLANDS

Here is a surgeon recommending non-operative treatment of tuberculous glands of the neck. In the October 3, 1914, number of *The New York Medical Journal* (p. 657), Robert T. Morris praises highly the injection of from 1 to 3 minims of a 7-percent solution of iodoform in oil, as originally recommended by Mosetig-Moorhof. This amount is injected, at a sitting, into each one of the larger glands, a little cocaine solution serving to relieve the pain, if thought necessary. These iodoform injections are made at intervals of three or four days. Hygienic and other treatment generally useful in tuberculosis should be associated.

The sole objection to these injections is the pain which they cause, and this may be a serious matter when younger patients are involved. When this happens, Doctor Morris has secured equally good results by the in-

duction of local hyperemia in the following manner:

The patient being in a reclining position, a hot-water-bag is applied for a minute or two, then an ice-bag for a minute or two, then again, a hot-water-bag, this alternation being continued for an hour once or twice a day. By this method of treatment, he has secured the cure of tuberculosis of the glands of the neck after a persistent course of from one to six months.

Recently he has added to the preceding methods the aid of the high-frequency electric current and the hypodermic injection of tuberculin. As a result of the adoption of these methods in the Postgraduate Hospital of New York, Doctor Morris declares that during the last ten years more than 100 patients afflicted with tuberculous glands of the neck have been treated in the department under his service, without operating in a single instance, except where the glands were actually suppurating when the patients were first seen.

MEDICAL TREATMENT OF CHOLELITHIASIS

Cholelithiasis, declares R. J. Smith (*Merck's Archives*, Sept., 1914, p. 273) arises from bile stasis, plus infection, and inflammation. The treatment may be hygienic, dietetic, and medicinal. Among the helpful expedients are: life in the open air, exercise short of fatigue, and a diet sparing in meats, fats, and starches, but presenting a considerable proportion of milk, buttermilk, fresh vegetables, and fresh fruits. Cultures of the Bulgarian bacillus are an important aid in the treatment, since intestinal putrefaction is a complicating feature in these cases, while the lactic-acid organism modifies and tends to prevent intestinal putrefaction. Doctor Smith further says that the combined sulphocarbolates also are efficient aids in the prevention of intestinal fermentation.

For the hepatic colic, Doctor Smith recommends hot or tepid baths in addition to colonic irrigations; also, glonoin, 1-100 grain, on the tongue, followed by a hypodermic injection of 1-100 grain of atropine, or of hyoscyamine in similar dosage. Strychnine arsenate helps to restore central nerve control. One standard granule each of glonoin, hyoscyamine, and strychnine may be given every fifteen minutes in hot water, until relief is secured or the physiological action of the hyoscyamine appears. If in spite of this medication the pain continues

severe, he recommends the hypodermic injection of morphine and hyoscine in association.

After the acute attack is relieved, the systemic treatment should be taken up, as follows:

The patient should receive boldine, 1-3 grain; chionanthin, 1-3 grain; bilein, 1-8 grain, and sodium succinate, 5 grains, repeated four times daily, and should freely drink soft water. This medication should be continued for from six months to a year.

The chionanthin is said to be aperient, diuretic, and febrifuge, and seems to have a specific action upon catarrh of the bowels, by reason of promoting a free flow of bile. The boldine, according to Dujardin-Beaumetz, increases the elimination of urea, augments the secretion of bile, and has a specific influence upon the pathologic conditions of the liver, gradually changing these to normal. The bile-salts are our best cholagoges.

How sodium succinate acts in cases of cholelithiasis, Doctor Smith does not explain. However, he declares that it certainly prevents the paroxysms, it may liquefy the bile, while also it seems to subdue the catarrhal affection of the biliary passages, thus quelling the infective cholangitis and cholecystitis.

In favorable cases, where treatment in the manner just described has been pursued, Doctor Smith finds that "the symptoms improve, local distress becomes less, attacks of pain are less frequent and less severe and finally cease, and the patient gives every indication of a cure."

NOVEL TREATMENT OF POSTDIPHTHERITIC PARALYSIS

Believing that postdiphtheritic paralysis is due to the nerve-center being attacked by diphtheria-toxins, W. M. Barton (*N. Y. Med. Jour.*, Oct. 3, 1914, p. 660) came to the conclusion that the most rational method of treatment to neutralize the systemic diphtheria-toxin is by the administration of the specific antitoxin, a method of treatment which originated in France some years ago. He reports a very interesting case in which this course was followed.

The patient was a young man of 23 who went safely through a severe attack of diphtheria, only to be affected some weeks later by gradual loss of muscular power in the hands and feet. The legs were so enfeebled that for a time he could neither walk a step nor even stand unsupported. Doctor Barton immediately began the administration

of diphtheria-antitoxin in 5000-unit doses. This dosage was repeated at one- or two-day intervals, until a total of 60,000 units of antitoxin had been administered. As a result, improvement was noticed within a few days, and in a little over a month he was able to walk about unassisted and return to work. Within six weeks he, apparently, was completely cured.

Doctor Barton evidently has no faith in the charge so often made, that diphtheria-antitoxin may cause paralysis; indeed, all the evidence now available tends to prove that exactly the opposite is true—that antitoxin, when properly administered, tends to prevent this serious complication.

TYPHUS, THE PLAGUE OF ARMIES IN THE FIELD

In a recent number of *CLINICAL MEDICINE* (see October, p. 1028), Dr. A. Rose calls attention to the scourge of lice from which soldiers have suffered during all military campaigns. As he pointed out in this article, the louse now is known to be the carrier of typhus; and typhus is one of the great plagues of the camp.

Doctor Rose's observations are of special interest, in view of the publication of two short papers, dealing with the same subject, in the *Comptes Rendus de l'Académie des Sciences* for November 9, 1914, in which Nicolle and his collaborators in the Pasteur Institute at Tunis definitely demonstrate, as already has been proven by our own medical officers of the Public Health Service, that the louse is the agent, or "carrier," in the transmission of typhus.

Doctor Lavarán, in commenting upon the paper of Nicolle, Blanc, and Conseil, declares that the discovery of this relationship has made possible practical methods of preventing typhus, which already have worked remarkable results. Thus, the disease, which has always been endemic in Tunis and which each year has carried off a number of victims among the indigenous population, has now nearly disappeared. In 1909, there were 836 cases of typhus, but in 1912 only 22. The only prophylactic measure resorted to has been the systematic destruction of all the lice found on the persons and in the vicinity of patients suffering from this disease.

Of most importance, however, Lavarán points out, is the danger of epidemics of typhus in the French army now in the field. This disease has always been one of the great plagues of military campaigns. The soldiers,

he says, in order to protect themselves against cold and projectiles, burrow into the earth and live under most unsanitary conditions, thus favoring the spread of the malady.

At the present time, as a result of the development of artillery, the employment of trenches is more general than ever, and there consequently is danger that during the winter months the germs of typhus may be implanted among the troops and thereby give birth to a disastrous epidemic. Such danger Lavarán thinks is peculiarly to be feared because typhus is known to be endemic in certain German provinces, particularly in Silesia, and this danger is intensified by the discovery of large numbers of lice in the German trenches and on the bodies of German prisoners. It is evident, therefore, that the treatment of phthiriasis among soldiers is necessary, not merely from the standpoint of cleanliness and hygiene, but more emphatically as a means of preventing the possible propagation of typhus among the armies now facing each other.

THE DOSAGE OF DIPHTHERIA ANTITOXIN SCIENTIFICALLY DETERMINED

Of exceeding practical interest to physicians is what is known as the Schick test, used to ascertain whether or not persons exposed to diphtheria are susceptible to the disease, the purpose of this test being to determine whether prophylactic injections of antitoxin should be given or not. The technic of this test was reported by W. H. Park, of New York, in a paper read at the last meeting of The American Medical Association. He showed quite conclusively that a large percentage of persons exposed to diphtheria (more than half at least) are naturally immune to the disease.

Now Schick has developed this reaction further and applied it to the determination of the amount of antitoxin actually necessary to produce immunity to the disease and to neutralize the diphtheria poison after the disease is once contracted. This work is reported in the *Zeitschrift fuer die gesammte experimentelle Medizin*, April, 1914 (p. 83).

The Schick test is made by the subcutaneous injection of a very small quantity of diphtheria toxin. If the patient is immune, nothing happens. If he is not immune, a slight redness and swelling develops at the site of the injection. In applying this test for the determination of dosage, Schick proceeded as follows: First, antitoxin was injected intramuscularly into the test patient;

then minimum quantities of diphtheria antitoxin were introduced beneath the skin, at 24-hour intervals. The exact immunizing effect of the antitoxic serum was measured by the diameter of the skin (Schick) reaction following.

A number of interesting deductions were arrived at as a result of these experiments:

1. It was shown that the dosage of antitoxin must be calculated according to the patient's weight.

2. It was shown that 50 units of antitoxin per kilogram (2 1-5 pounds) of the individual's body weight is sufficient to afford protection against diphtheria to those exposed.

3. In mild cases of diphtheria, a single dose of 100 units of antitoxin per kilogram of the patient's weight is sufficient.

4. The maximum antitoxin effect is obtained with a dosage of 500 units per kilogram, larger doses than this having no influence whatever. Therefore, in the severest cases 500 units per kilogram should be injected.

5. As already pointed out by Park, Schick showed the necessity of administering the amount of antitoxin required at the earliest possible moment, on account of the time required to develop full antitoxin action.

Now to apply these observations:

We may say that as a prophylactic dose for a child weighing 20 kilograms (44 pounds), 1000 units of antitoxin should be the dose; 2000 units should be injected in mild cases of the disease, while in the severest cases 10,000 units may be required.

An adult weighing 60 kilograms (132 pounds) should be given a prophylactic dose of 3000 units, a curative dose of 6000 units if the case is a mild one, and if it is of the most severe type, a dose of 30,000 units. Of course, in cases of varying severity, between mild and severe, the dosage must be adjusted somewhere between these two extremes.

It is significant that Schick's observations bear out in a remarkable way the experimental studies and clinical observations of Professor Park.

ANOTHER CURE FOR PYORRHEA

The brilliant results obtained with emetine in the treatment of pyorrhea should not blind us to the possibility of developing other remedies of value in this disorder. Thus, it is of interest to find that P. G. White, a dentist in the U. S. Navy, is using mercury succinimide, with alleged good results. Its value in this direction became evident when

patients suffering from pyorrhea, upon being treated with this mercury salt for other conditions, were discovered to present a surprising amelioration in the condition of their gums. So far Doctor White reports having treated 6 cases of pyorrhea with mercury succinimide, and he declares that every one of these patients was cured inside of four or five weeks.

The dose of the mercurial given at the first injection varies according to the physical condition of the patient, but mostly it has been in the neighborhood of 1 grain. Thus, the first dose is about 6-5 (1 1-5) grain, and this amount is diminished by 1-5 grain at each injection (gr. 6-5, 5-5, 4-5, etc.), providing the improvement of the patient warrants such reduction. The injections are given at least once a week. Local treatment, attended to every other day, consists in the thorough removal of calcareous deposits and the extraction of hopeless teeth and roots.

The 5 cases referred to by Doctor White are described in detail in his paper, which appears in the October (1914) number of the *U. S. Naval Bulletin*.

These results are good, but apparently not equal to those secured with emetine.

IMPLANTATION OF NERVE-ENDS

Advances, almost startling, are rapidly being made in the hetero- and the auto-transplantation of tissues and organs, thanks to which many a helpless and hopeless cripple or diseased individual can have—and already has—his normal physical or physiological functioning restored, and thus again become a useful member of society. No doubt, further, the present terrible world war will have to its credit at least one good result—numerous surgeons attending this bloody conflict will improve the golden opportunity of applying to human beings operations hitherto restricted to experimental animals, while the more daring ones, moreover, will seek to extend the present field of actual knowledge in this direction. What a chance this, for instance, for Alexis Carrel, who since the outbreak of the war has been in charge of the military hospital at Lyons, France (his native city).

These reflections are suggested by the report of the proceedings of the 43d annual meeting of the German Association of Surgeons held in Berlin in April, and reported in the *Therapie der Gegenwart* for July. The particular presentation to which we here refer is an address by Doctor Heineke. (It is

much to be deplored that in first-hand references to medical authorities continental reports systematically fail to give their initials and residence, thereby preventing their identification and personification in the mind of the reader—a real calamity in the case of the Meier's, Mueller's, Schmidt's and similar pervasive cognomens of other nationalities). But, to the point.

Already startling reports upon organic transplantation have been recorded in these columns, including those of nerves, but these experiments (upon animals) by Heineke are nothing short of wonderful, it seems, in their far-reaching effects. Thus, this operator severs a nerve supplying a given muscle and then implants some other healthy nerve into that muscle; and perfect union takes place. As a result, the muscle does not degenerate, but, rather, it very soon becomes electrically excitable, and, eventually, restored in function.

Indeed, this restoration has taken place even if the implantation was performed as late as three months after the respective nerve had been cut. The implanted nerve may be carried over from any other unrelated innervation-area.

The operation consists in merely inserting the end of the substitutive nerve anywhere into the paralyzed muscle and fixing it in place. The stump rapidly produces new end-organs, which grow into the muscle-tissue, by, presumably, following the nerve-paths present—as has been shown by other writers.

Another restitutive operation consists in apposing a healthy muscle to a paralyzed muscle; and here also the nerves of the former will enter and revivify the latter—a procedure successfully carried out by Hacker in the case of a human subject.

Similar operations by Katzenstein, albeit of a minor nature, have been mentioned in these pages not long ago.

THE PHENOL TREATMENT OF TETANUS

Some months ago, we referred, in *CLINICAL MEDICINE*, to the use of phenol (carbolic acid) in the treatment of tetanus, as originally advised by Baccelli. Owing to the frequency of this disease among wounded soldiers, this method of treatment has been taken up again in France. In a short paper appearing in *Comptes Rendus de l'Academie des Sciences*, for November 9, 1914 (p. 664), Caillaud and Corniglion report some recent results obtained with this remedy. They say

that among 200 wounded soldiers treated at the Hôpital Complémentaire de Beau-soleil there were 6 cases of tetanus. The first 2 cases were treated with antitetanic serum and chloral, and both died in about three days. This failure led the authors to try the Baccelli method, but supplementing it with the intravenous injection of lantol (colloidal rhodium).

Carbolic acid was employed in 1 percent solution, instead of the 3- to 4-percent advised by Baccelli. Of this solution, 40 Cc. was injected once daily, this quantity gradually being increased to 70 Cc., then again reduced after the patient began to improve. At the end of the treatment the 1 percent solution was replaced by a solution of 2 percent, of which the doses employed naturally were only half as great. The lantol (colloidal rhodium) was given intravenously in doses of 6 Cc, every day in the severe cases, until there no longer was danger; daily treatment for eight days being required for this. All the 4 cases treated in the manner described terminated in a cure.

The authors found the treatment to be well tolerated by all 4 men, both as regards the lantol and the phenol. There appeared neither general reaction nor local complications, the single inconvenience observed being an erythema, with a local induration, following the injection of a 2-percent solution of phenol. These symptoms disappeared quickly upon cessation of injections. Improvement set in rapidly, being slight at first, but gradually progressing toward cure, which was completed within from fifteen to twenty days in two very severe cases, and in about fifteen days in the two milder ones.

The authors say that 5 other tetanus victims have been treated in this manner, that is, either with phenol alone or combined with lantol. Where previously the mortality had been high, all of these 5 men recovered. This makes a total of 9 cures in 9 patients subjected to this treatment.

IODINE IN ACCIDENT SURGERY

A method of using iodine as an antiseptic—which M. R. Crain (*Amer. Jour. of Surg.*, Oct., 1914) calls "dry cleaning"—in emergency accident-cases consists in washing the skin surrounding a wound with a 1:1000 solution of iodine in gasolin. As soon as the skin is dry, he goes over the surface of the skin with a half-strength tincture of iodine. This method is employed where there are open wounds, in which the use of the water and

soap usually employed for scrubbing would be likely to carry more or less filth into the wound, thereby infecting it. Doctor Crain adds that, if there is much oozing from the surface of the wound after the vessels are tied, the tincture of iodine may be applied directly or the wound may be packed with gauze moistened with the iodine preparation. It is highly important that no water be employed, which would macerate the epidermis, for in that event the sterilization with iodine will not be efficient.

This method of treating wounds originated in Bastianelli's clinic in Rome and has been in use by the Mayo brothers for several years. Doctor Crain adds that, since the tincture of iodine corrodes everything with which it comes in contact, and, hence, is a bad thing to carry around by the surgeon in his bag, he conceived the idea of putting up the pure iodine in gelatin capsules. He explains that 4.89 grains of iodine in each capsule, when dissolved in 16 fluid ounces of gasolin, yields a 1 : 1000 solution, or of the strength employed in this procedure; while a capsule containing 13.59 grains of iodine, if dissolved in one ounce of alcohol, makes a 3.5-percent solution, which is half the strength of the official tincture.

This idea is an excellent one, and we commend it to our readers for adoption; with an additional suggestion to the experimentally inclined. It is barely possible that the volatile iodine in the capsule occasionally may cause the cap to stick fast. To obviate such a result, a little fine starch on the top of the body-capsule has been found useful in the case of other filling; here, however, the chemically indifferent talcum would be preferable. Of course, only a trifle should be applied with a fine brush, and none should enter the inside of the capsule.

OLIVE-OIL USEFUL IN TREATING INTESTINAL STASIS

At the present time there is a distinct mineral oil "cult." When Sir Arbuthnot Lane presented his ideas relative to the influence of intestinal stasis upon the production of autotoxemia, he advised the use of Russian mineral-oil as a laxative whenever surgical intervention is not required. Physicians everywhere have taken up the idea with amazing rapidity, and now liquid petrolatum is one of the "big sellers" at the average drug-store.

Doctor Beverly Robinson, writing in *The New York Medical Journal* (Nov. 28, p. 1053).

holds that olive-oil is a better agent for the treatment of obstinate constipation—or, intestinal stasis, as it is now called—than is the mineral oil. Taken by the mouth, olive oil is quite as innocuous as the nonabsorbable mineral oil; also, it promotes healthy nutrition, as well as being an equally good intestinal lubricant. The mineral oil, of course, is not a nutrient. Furthermore, olive-oil, when properly taken, causes no dyspeptic symptoms of any importance or which can not readily be corrected by a simultaneous use of pancreatin, to emulsify the fat. Finally, olive-oil promotes intestinal peristalsis, both when taken by the mouth and when administered as an enema.

Continuing, Doctor Robinson says:

"Some of the new abdominal supports may hold up relaxed organs without positive injury, but the true way of cure is, rather, to restore abdominal strength by proper exercises, instructed massage, and open-air life, as far as possible, supplemented by medicinal tonics if they are clearly indicated. Some of the really effective ones among these are found in our laxative pills. Such are, strychnine, nux vomica, and belladonna; podophyllin, euonymin, cascara, aloin, ipecac, may, one or several, be added in minute doses, and they doubtless help either the flow of bile or the contracture of the intestinal muscles. The absence or insufficiency of secretions, such as the gastric, pancreatic or intestinal juices, may wisely be overcome by being added to by a few products from honorable manufacturing firms, which are the outcome of scientific researches in a chemical and biological direction."

SODIUM AND POTASSIUM SALTS

Since the breaking out of the European war, the prices of potash salts of various kinds have gone sky-rocketing, this being due to the fact that Germany produces a very large proportion of the potash of the world and controls the market in this valuable commodity. Under the circumstances, American physicians are being generally advised by the medical journals to substitute the sodium salts for the potash salts. As a matter of fact, the sodium salts present certain very decided advantages and disadvantages. These are pointed out in an article by David I. Macht, in the Johns Hopkins *Bulletin*, September, 1914, p. 278. Doctor Macht has been investigating the action of potassium and sodium iodide and of the iodine ion on

the heart and blood vessels, the experiments being made mainly on frogs, rabbits, and dogs.

Without going into the details of his experiments, it may be said that the potassium ion produces relaxation of the blood vessels and a marked depression of the heart, while the sodium ion has a slight stimulating action, both on the blood vessels and the heart. The iodine ion is found to be a powerful stimulant both of the heart and blood vessels, not only in the isolated organs, but also in the organs of living animals. The conclusion is, therefore, that it is not a matter of indifference which of the iodides is to be chosen. If it is desired to lower blood pressure, for instance, then the potassium iodide is to be preferred. On the other hand, if a distinctly iodine action is desired, not only is the sodium salt equally efficacious, but, since it is less depressing, it may be the preparation of choice.

CUMULATIVE ACTION OF DIGITALIS

At the late meeting of the German Congress for Internal Medicine, R. Gottlieb presented an account (*Muench. Med. Woch.*, No. 20, p. 1142) of some interesting work done by Von Issekutz, at the Pharmacologic Institute of Heidelberg, on digitalis (or any of its active constituents), for the purpose of determining why digitalis continues its action so long after it has been administered.

Issekutz performed his experiments upon still-surviving frog hearts; and this is what he deduced therefrom:

The cardiotoxic substances of digitalis are abstracted by the heart-muscle from the nutritive fluid (blood stream) passing through the heart. The heart-muscle fixes and holds the digitalic body in an extraordinary manner. The degree and persistence of the drug's action depends upon the length of time that the drug-laden current passes through the heart and upon the amount held back in the tissues. The portion of the drug first fixed does not at once produce any visible alterations in the heart's performance. When the process of empoisoning is interrupted sufficiently early, and before not enough of the poison is absorbed to kill, the heart will continue to beat.

At this point the proof can be brought of the relatively firm fixation of the digitalic substances by the muscle.

The pulsating heart is thoroughly washed out by a current of a biologic, nontoxic fluid circulating through it for a time—up to as long as one hour—thereby removing all extraneous poison from the interior of the

organ. Then the circulation of the digitalis-laden fluid through the heart thus treated is resumed, and is continued until it ceases beating, the time being noted.

The operator takes a second heart, otherwise in the same condition as the first one, but which has had no chance to become empoisoned, because not exposed to it. Then this fresh pulsating control-heart is subjected to the same kind of digitalis-laden current as the other, and this is continued until it also dies. It will be found that the former ceased beating much sooner than the one having had but one period of treatment; thus presenting conclusive proof that the first heart actually had absorbed the digitalis poison from the nutritive current and stored it in its muscular tissues.

ULTRAVIOLET-LIGHT DISINFECTION

As was first pointed out by Finsen, ultraviolet light is a powerful bactericide, and this fact has been practically applied in various directions, such as for sterilizing water and milk. Now Friedberger and Stioji, have demonstrated (*Deut. Med. Woch.*, 1914, No. 12) this agent's utility for disinfecting the mouth and pharynx, especially in ridding the cavity of the diphtheria and the prodigious bacilli. The experiments thus far have been made with rabbits, in the case of which a sufficiently long-continued irradiation nearly, if not completely, eradicated the diphtheria germs from the buccal cavity, without producing any serious lesions.

The authors suggest the possibility of curing by this means chronic harborers (carriers) of the germs of diphtheria, articular rheumatism, cerebrospinal meningitis, and the rest.

SALOPHEN VERSUS ASPIRIN

In a contribution to the July number of the *Therapie der Gegenwart*, R. Thierfelder, of Plauen, points out how, in a very eminent degree, acetylated salicylic acid (commonly known as aspirin) combines in itself the desirable properties of an antirheumatic, anti-neuralgic, and analgesic; while in consequence of this fact it serves an excellent purpose when in the respective categories a definite diagnosis has not as yet been established. However, this remedy has become so popularized that, in the author's opinion, physicians might well look for a less-familiar substitute.

This need, Thierfelder believes, is more than fully supplied by the older, although

neglected and almost forgotten, synthetic salophen—chemically, acetylparaminophenyl salicylate, or, more conveniently, acetyl-amidophenol salicylate, or, still shorter, acetamidosalol. This preparation, we are told, not only possesses all the valuable properties of aspirin, but even is preferable, in that it is less of a diaphoretic than is the latter. Moreover, aspirin is split up in the stomach into its components, and the liberated acetylsalicylic acid will add to the distress of those patients who already suffer from gastric hyperacidity.

Salophen also undergoes decomposition; not, however, in the stomach, but in the intestine, like salol. Salol, therapeutically, took the place of salicylic acid, because it did not irritate the stomach; but, in its turn, it was superseded by aspirin, because the alkaline intestinal contents at once set free the phenol of the remedy, and that attacked the kidneys. The same chemical result is true for salophen; however, in the latter case, the reaction is a slowly progressive process—and there is the difference.

Salophen, being the paramidophenylacetyl salicylic-acid ester ("salt"), by an alkali is split up into its components, salicylic acid and acetylparamidophenol, and after the third hour these two substances appear in the urine in very small and even percentage, and this continues up to the twentieth hour. It is this slow, gradual, and regular introduction into the system and its parallel passage through the kidneys that accounts for absence of disagreeable symptoms resulting from this salicylate, especially as to gastric and nervous disturbances.

The profession is reminded that some years ago salophen was credited by trustworthy clinicians as a decidedly valuable remedy, among whom were, for example, Guttman, of the Berlin Moabit Krankenhaus; Froehlich, of the Allgemeines Krankenhaus of Wien; Gerhard, of the university clinic at Jena; Moseler, of the university clinic of Greifswald; also Drews, Claus, and Hennig.

Personally, Doctor Thierfelder has found in salophen an excellent analgesic, and, because of this, almost a specific in the nervous forms of influenza; as also in nervous headache, rheumatic toothache, and migraine. In these latter conditions, besides in renal colic, pyelitis, and painful vesical catarrh, he prescribes (with excellent results) doses of 8 to 15 grains four times a day.

Further advantages are that it is odorless and tasteless, and, because of its relative innocuousness, it is an almost ideal remedy

for children. The obstacle to the more general introduction of salophen, the author believes, has been its comparative costliness; this, though, he holds, should not deter any practitioner from prescribing it for such of his patients to whom price is of secondary consideration—and more particularly those whose chronic ailment demands a prolonged use of some analgesic. Besides, it should be considered as an alternant with other remedies of this class. (Recent quotations are: aspirin, \$1.00 an ounce; salophen, 60 cents per ounce.)

THE PITUITARY GLAND AND ITS MEANING TO THE BODY

It has long been known that over-activity of the anterior portion of the pituitary gland (the hypophysis) stimulates tissue growth, especially of the skeleton. That curious disease which we know as "acromegaly" has been definitely connected with disorders of this gland. Usually when such cases come to autopsy, tumor growth of the hypophysis will be found. If over-activity of the hypophysis causes increase of skeletal growth, together with hyperactivity of the sexual system, conversely anterior-lobe insufficiency should inhibit skeletal growth and arrest sexual development.

The whole subject is discussed in a most interesting way in Harvey Cushing's classical paper on "Surgical Experiences with Pituitary Disorders" in *The Journal of the American Medical Association* (Oct. 31, p. 1516). Returning to the influence of the posterior lobe of the pituitary gland, Doctor Cushing says that while little is known of hyperplasia of this body, this portion of the gland appears to be more concerned with tissue metabolism than the anterior portion. When it is rendered inactive by disease or by compression, metabolic processes are checked; a high tolerance is acquired for carbohydrates, which are promptly stored as fat; there is drowsiness, insensitivity, slow pulse and respiration, with a lowered respiratory quotient, a subnormal temperature, low blood-pressure, and so on. This complex of symptoms, as has been pointed out, in some measure simulates the phenomenon of hibernation, a state in which the metabolic fires burn low, and one in which marked histologic changes have been shown to occur in the gland—changes which suggest a seasonal wave of physiologic inactivity.

It is interesting to learn that many symptoms formerly obscure as to their origin can

be explained by over-activity or under-activity of the pituitary body; for instance, this is particularly true as regards many forms of obesity or its opposite, emaciation. Decided loss of flesh has followed the administration of posterior lobe extract over a long period; and, as already pointed out in *CLINICAL MEDICINE* (Feb., 1914, p. 110), polyuria or symptomatic diabetes insipidus may be caused by disease of the pituitary. Other symptoms to which such diseases may give rise are undue drowsiness, various psychoses, and sexual disorders, such as amenorrhea in women or impotency in men.

It is interesting to learn that a good deal can be accomplished by the surgeon in the treatment of diseases of pituitary origin. For instance, one of the most disturbing complications of pituitary tumor is the blindness or other visual disturbance resulting from pressure of the tumor growth upon the optical chiasm. In a few cases operated upon by Cushing the loss of vision has been arrested or even partially restored by removal of a portion of the tumor. The tumor is approached by the surgeon through an incision made beneath the upper lip, the tumor site in the postnasal cavity being exposed by a speculum introduced at this point.

Doctor Cushing reports operative experiences with 95 cases, giving an operative mortality of 5 percent and a case mortality of 10.5 percent.

TREATMENT OF VULVOVAGINITIS IN CHILDREN

Gonorrheal vulvovaginitis in children occurs epidemically not infrequently in children's institutions, being transmitted probably by clothing, towels, washcloths, and particularly through the school lavatory. In the treatment of these cases, Barnett (*Arch. of Pediat.*, Sept., 1913) advises examination with the Kelly endoscope, removal of the secretion, and the application of Lugol's solution (compound solution of iodine) to the cervix and vaginal walls as the endoscope is being slowly withdrawn. These applications are to be made three times a week, while, in addition, the mother is directed to give daily vaginal douches of a 1 : 10,000 solution of potassium permanganate, introduced through a soft-rubber catheter.

Taussig, in *The American Journal of the Medical Sciences*, for October 1914, recommends applications of a 2-percent or even a 4-percent, solution of silver nitrate, the injections being made with an ordinary small

rubber-tipped urethral syringe. While these solutions seem strong, he has observed no untoward symptoms, and the results obtained are satisfactory. Both Barnett and Taussig recommend the administration of hexamethylenamine.

AN EPIDEMIC OF PARATYPHOID FEVER

There is no doubt that some, at least, of the mild epidemics of what we suppose to be typhoid fever really are of the paratyphoid type. Unless a careful bacteriologic diagnosis be made, it is not always easy to differentiate between the two diseases. Such an epidemic of paratyphoid fever occurred in the Boston State Hospital in 1910, and it is reported at considerable length by several observers in five different papers published in *The Boston Medical and Surgical Journal*, for October 8, 1914. To summarize these reports, the conclusions reached by the authors are about as follows:

The causative organism is shown to be the bacillus paratyphosus. The epidemic probably originated as a case of "meat-poisoning" developing in a male patient who had been a kitchen-assistant. Whether this patient himself infected the meat that served to spread the disease, or whether he was afterward infected by it, is not clearly demonstrated. Altogether, 30 patients were affected—23 women and 7 men. There were no deaths.

Careful comparison is made between the symptoms of typhoid and the paratyphoid fever observed in this epidemic. It was found that anorexia, diarrhea, abdominal pain, general malaise, and vomiting were not as common during this epidemic as they mostly are in an attack of typhoid fever. The initial fever virtually was constant, but it did not present the typical stepladder course of true typhoid fever. In 8 cases, there occurred a peculiar drop of the temperature to the subnormal in the second or third week. The total duration of the disease lasted from eleven to thirty-five days, as compared with thirty to forty-nine days in a similar epidemic of typhoid fever.

An interesting feature of these cases of paratyphoid fever was the complicating stiffness of the joints observed during the course of the disease in 19 out of the 30 cases described. The examination of blood revealed no hypoleukocytosis or a diminished number of eosinophiles, and it is suggested that this point may be of some value in differentiating from typhoid fever. In paratyphoid fever,

the blood picture remains within the normal range.

There were few complications. In one patient lobar pneumonia and in another acute parenchymatous nephritis developed. As to sequels, all the patients, with one or two exceptions, complained of stiffness of the knee- and ankle-joints after getting up. Several complained of an unusual tendency to fatigue persisting after the termination of the attack.

The treatment seems to have been in the main purely symptomatic; that is, cathartics and enemata, to relieve constipation; intestinal and urinary antiseptics; tepid baths, to reduce the temperature; aspirin for the headache; and occasional hypnotics. The diet in the main was liquid and much the same as for typhoid fever.

RELATION OF CHRONIC GASTRITIS TO CANCER OF STOMACH

While more and more gastric ulcer and chronic gastritis are being credited with constituting the main underlying factor of gastric carcinoma, Konjetzny, of Kiel (Congress of German Surgeons; cf. *Muench. Med. Woch.*, May 19, p. 1146), has convinced himself that altogether too much importance has been attached to the former condition; for, he asserts, not to exceed 5 percent of cases reported have positively been traced to ulcers. Still, Konjetzny agrees with the irritation-theory of casual genesis, which assumes a precarcinomatous condition of the stomach-wall; this, though, principally being chronic gastritis.

Konjetzny explains the physical reasons why gastritis largely was overlooked by investigators. As for himself, he utilized material still retaining body-heat. Altogether 89 diseased stomachs were examined histologically in a most searching manner, and in 90 percent of these an intimate connection could be demonstrated between the consequences of gastritis (mucosa hyperplasias, polyps) and the carcinoma, as shown microscopically by the continuous passage of one into the other. Only in two instances (out of the 89) an undoubted ulcer-carcinoma was encountered.

In view of these definite findings, the lecturer emphasizes the great practical importance for the clinician face to face with chronic gastritis and the need of his paying more than common attention to torpid catarrhs of the stomach (especially in persons past middle life), as a prophylactic measure against cancer of the stomach.

Miscellaneous Articles

From the Firing Line in France

THE first British regiments that went over to the continent carried with them a large number of physicians who had been in active practice at home. Later, these were relieved and sent back and for a while there was a demand, that could not be supplied, for medical men to take their places. Then the Red Cross came into service and with it many volunteer surgeons. Finally, the English authorities settled back into their old custom of refusing to enlist in the regular service any medical man who had not an English degree, claiming that the qualifications of the latter were superior to those of any others. This threw out a number of American physicians whose college-diplomas were not recognized. These men were turned over to the Red Cross department, the English government, in this way, protecting itself from responsibilities and payment of pensions to those becoming injured or sick.

As the war went on, the Red Cross surgeons and the regular-army surgeons dropped all distinctions and as a rule worked together very harmoniously. The younger men, particularly those of the Red Cross order, are being kept on the battle line; the older ones remain in the rear and are engaged in the field hospitals.

While it is very difficult to make any correct estimate, there undoubtedly has been a heavy mortality among the surgeons, particularly on the firing line; a conclusion based upon personal observation, including the disappearance of surgeons one was accustomed to see about. An instance of this kind, coming under my observation, was that of a surgeon with whom I had been acquainted several weeks.

This surgeon called me one day to assist in operating upon an officer whose shoulder joint had been crushed by a shell. The hemorrhage had been severe and the work of tying the arteries and preparing the patient for transportation to the hospital in the rear required some time. The wounded soldier urged the surgeon to go with him in the ambulance. A Red Cross nurse, this surgeon,

and the wounded man were placed in the ambulance and they started for the rear. A few hundred yards away a shrapnel shell struck the ambulance and literally tore it into fragments. There was nothing in the remains by which the bodies of the nurse, the surgeon or the patient could be distinguished.

At another time, a surgeon who had been assigned with me for several days at a particular point near the trenches was called to a bomb-proof enclosure, to give aid, when a shell burst and threw tons of earth into the enclosure, completely burying the soldiers and surgeons.

Other surgeons whom I have missed, disappeared suddenly but whether they were killed or wounded or called for other service I cannot say.

Shelling the trenches where soldiers are protected has been the characteristic feature of the last few weeks' struggle. Every now and then a call would come for ambulance surgeons to go to a certain point, and after a time, in which a roar of firearms, the rattle of the magazine-guns, and occasionally loud cries and cheers were heard, a stream of wounded would come pouring back. These were occasions when attempts were being made to break through the lines. While they were not successful, there must have been a terrible mortality. On one occasion, I and three other surgeons worked over eighteen hours in binding wounds up and directing the wounded to the hospital in the rear.

The most difficult work was the tying of arteries, which frequently required two surgeons or the aid of an expert nurse; the aim being to make the ligatures as perfect as possible for the time being. Other service was more or less temporary. Broken bones and lacerated wounds merely were cleansed as well as possible and covered with antiseptic dressings; then a note was pinned on to the man's garment, stating what had been done, together with the initials of the surgeon.

On one occasion, when the line had to fall back several miles, great confusion followed, and the disposal of the wounded men was

slow and difficult. Many were killed from shells. One field hospital practically was obliterated and probably both the surgeons at work were killed; at least many of the nurses and patients were destroyed. Later, the fragments of dead men were thrown into a trench near where the hospital stood and covered up. Many times it was extremely dangerous for the surgeons to venture near the trenches, to do so being at greatest personal risk.

On another occasion the wounded came in in such numbers that a special surgeon was sent to determine the disposition of the wounded: whether they should be sent miles away in the rear or whether they should be sent to the nearest field hospital. It was evident that the latter was crowded beyond its capacity and that it was necessary to send the slightly wounded far to the rear.

The extremely cold weather and the rains have added greatly to the patients' discomforts. A number of wounded have succumbed to the low temperature, being found dead in the field hospitals or on the firing-line. However, the continuance of the cold weather has happily brought with it a generous supply of blankets and warm clothing, things which were most welcome. Soldiers in the rear, out of the firing-line, could make themselves comfortable, but those in the trenches suffered severely. Coffee and food were taken to those men in tanks, and under cover as much as possible.

Wounded men in the trenches were assisted in every way to get out, and carried out of the extreme danger zone, where the field surgeon was waiting for them. It was difficult to have tents or to have any sort of covering that would attract the attention of the airmen and give the appearance of a battery or the gathering of a force of men. This then would be signaled to the German batteries in the rear, and in a very brief time shells would begin to fall into exact position. Of course, all houses and villages along the line of the trenches were the constant object for shelling from the German batteries. In foggy and rainy weather, the airmen seem not to be able to determine the position of men and batteries, hence, the shelling is irregular and falls wide of the intended mark.

On our side, probably the same tactics are being used; batteries are moved constantly from point to point and partially concealed, and for days an incessant bombardment is kept up. Then they move away. Companies of infantry constantly keep moving up and down the line, and motor wagons with ammunition and provisions are in incessant activity night and day.

The poor surgeon shivering in the blanket in a shed or under a slight covering, with a



Courtesy: Chicago Tribune

Wound said to be caused by a dum-dum bullet.

little red flag outside to indicate where he was, had no conception of what was going on. The roar of the artillery in all directions and the stream of wounded that would come along in fits and starts were about the limit of his knowledge of events. Soldiers from the trenches would tell most horrid tales of mortality and themselves show injuries that were extremely perplexing, and all the surgeon could do was, to give the proper temporary dressings and see that these men were carried to the nearest hospital, if they could not walk.

On one occasion, I was sent down to a clump of woods, to give aid to some German prisoners. They nearly all suffered from stab-, sword- or bayonet-wounds. Some of

the wounds were frightful in extent and magnitude, the bleeding, however, was slight. The prisoners expressed a degree of satisfaction at being captured that surprised me. The few who spoke English hoped that they would never have to go into service again. These men were captured by the Indian troops, who seemed to have unusual skill with the bayonet and sword. These wounded prisoners all went to the rear, the same as the wounded of our side, and probably received the same treatment, and no doubt very soon will be carried to England and housed in comfortable hospitals.



Copyright: Underwood and Underwood

Another wound said to be caused by a dum-dum bullet.

For several weeks my duties have been confined to a radius of about twenty miles up and down the front. At times the work would be concentrated along a range of a mile or more where heavy artillery fire was followed by infantry charges. On these occasions, we went back to the field hospital, so as to be ready to move this, and the inmates, at any moment. On two occasions, we were obliged to move backward a mile or more; but the next day we went forward again, the lines having regained the position lost.

As times go on, the perfection of the movement of troops, batteries, and kitchens, also the ammunition wagons, is evident, and wherever a charge is made and a new hospital established, ambulance-motors gather at once, and nurses and surgeons are on hand with a promptness that is astonishing.

One dark night, I went out to the trenches with a kitchen-gang of men who were distributing coffee and food, and saw the poor fellows lying under the dirt embankments in water and mud, and, yet, exhibiting a cheerfulness that was surprising. Food and coffee more distributed with great rapidity all along the line. Shells were falling occasionally and there was no time for gossip or exchange of opinions. Many of the soldiers handed me notes, which they had written in these distressing conditions, to be mailed. Most of the troops remained in the trenches for from twenty to thirty hours, then went back to the rear; but they were liable to be called any moment to support an infantry charge.

One night, while I was on the firing line dressing a crushed leg in the dim light of only an electric lamp, a petroleum bomb burst some distance away, when in that flash of light I saw a field covered with soldiers, evidently Germans concentrating for a charge. That was the only view I ever had of a battlefield, and those men were nearly a mile off, swarming down through a valley and up an incline, and over our trenches, to break our line.

Back at the field hospital I was ordered to go a mile north to the edge of a wood. Evidently the heaviest conflict was to be in that neighborhood. A temporary field hospital was put up back of the woods, and very soon there came in a stream of wounded men that required our entire attention until 10 o'clock the next forenoon. We heard that the enemy had been repulsed, with great slaughter, but we were so fully exhausted that all that concerned us was to get where we could have a few hours' rest.

The censorship of letters and of communications of any kind is becoming more and more severe, even as to us surgeons. The orders are clear, namely: write what you please, but under no circumstance send the letter away. Many soldiers, wounded beyond the possibility of again entering service, are pledged not to carry home with them any letters descriptive of the lines and locations or other matters that might conflict

with military demands. For the same reason, I may not mention geographical names. The fear of harsh treatment or loss of pension prevents many a man from carrying out news of this character. Names of towns and the rivers along which severe battles have been fought must not be mentioned.

An incident of the folly of undue enthusiasm was that of an American surgeon who somehow got into the service and was extremely anxious to do surgical work. He had some ability as an operator and was kept in the field hospital and in hospitals in the rear. By and by he grew impatient and insisted upon being assigned to the firing-line; but the first day out a shell tore off his arm at the elbow. Then he discovered that, beyond proper treatment in the hospital, this was all the experience he would get out of this war. He had been told to keep out of the danger-zone, but his eagerness to witness a real battle and to see men in deadly conflict drove out all caution; and now he will return home a sadder, even if not a wiser man.

The field-hospital men acquire a degree of caution and judgment after a little experience, and, while they are always exposed and liable any moment to be struck by a stray shell, they are alert to any threatening danger and quick to avoid possibilities of death and injury. Thus, for example, a battery of heavy guns shelling the enemy is almost certain to attract return fire, and this will make the vicinity exceedingly dangerous. Surgeons and dressers, and even field hospitals, move away from this zone very quickly.

So far as one can judge, the German artillery is very exact and accurate in the shelling of a selected locality. It is noticeable that after an English or a French battery has fired a dozen rounds or more it moves its position, and particularly so if there are any German airmen to locate them. Ammunition-motors drop their load of shells and move away as quickly as possible; also officers of high rank avoid these places, particularly when they have drawn fire from the enemy's gun.

Notwithstanding the fact that we are constantly tying arteries, dressing wounds, and relieving the pitiable soldiers, one soon becomes conscious of the limitations of this kind of medical service. In the field hospital, a little more exact field-work is being done, but even this is only temporary, and the wounded are sent as soon as possible to the regular military hospitals both in France and England; hence, are never seen again, so that the first attendant is unable to determine the results of the surgical service given.

Everywhere there is the anxious desire to get the wounded out of sight as quickly as possible, and to bury the dead. There is a plain psychological reason for this, for, although the wounded are more or less optimistic and often delirious in their exaltation, the effect of the sight of carnage on the fighting soldier is a bad one. In reading reports such as this one, it must be borne in mind that the writer must avoid many details. Thus, the surgeon's duty is simply to attend to the work before him and obey orders from the field hospital. He may describe the privations of the inhabitants of towns occupied, or speak of the vast numbers of women and children that are made homeless, but beyond this he is not permitted to express any opinion. I will mention, in closing, that many surgeons when not actively engaged in the field hospital, hold outdoor clinics for the refugees—and some of these folk are pitiful to the last degree. While but few are wounded, the majority are suffering from want of food, clothing, and comforts of any kind. Kind-hearted surgeons often stop and give aid to these poor refugees in some temporary way, but as a rule they have neither time nor energy left to do anything more than to take care of the wounded soldiers as they come in.

I will venture one prediction, which I feel sure will come to pass, namely, that this war will end soon. It may indeed last a few months longer, but the end is coming soon. The losses are so enormous and so terrible that the nations involved cannot endure them much longer.

"BRITAIN"

SUPPURATIVE NEPHRITIC LESION COMPLICATED BY ACNE

I wish to report a case that, while it has been very interesting to me, also may enlist the interest of readers of *CLINICAL MEDICINE*; and I shall try to be as brief as possible, yet hope to be thoroughly understood.

The patient is a farmer, aged 30, of German descent, with a good family history. The man ordinarily is of exemplary habits but occasionally he will get on a spree, and at these times he is not very choice about what he drinks. If he can get good whisky he drinks it; if not, he consumes the next best, and sometimes that is pretty bad stuff. He has kept up the periodical drunks ever since he was a mere boy.

About ten years ago, he had his first severe attack of acute suppurative nephritis—as it

has, eventually, proved to be—this trouble soon assuming a subacute and finally a chronic form. For a number of years, these attacks of chronic suppurative nephritis have occurred from two to four months apart, while once there was an interval of seven months. Preceding such an attack he experiences a heavy, dead ache in the back, with pains, more acute in character, extending downward to the inner side of the thighs and also to the testicles and penis. These pains are not continuous, but set in from time to time. After a day or two, the pain in the back grows more acute and radiates around into the region of the bladder. His suffering becomes so great at times that it requires two and sometimes three hypodermic injections of 1-4 grains of morphine and 1-250 grain of atropine to relieve him. Occasionally, when the pain begins to grow severe, he has to vomit repeatedly and to void urine often,

In from forty-eight to ninety hours, the nephritic abscess formed breaks and empties into the bladder, often rendering the urine so turbid and thick that it cannot be voided; I have seen it so thick that it would not flow through a medium-sized catheter, compelling me to throw into the bladder a quantity of (antiseptic) fluid sufficient to thin down the contents. Incidentally, there are several constricted portions along the urethra that interfere with the introduction of a catheter of large size, and I have never been able to introduce the cystoscope; at the hospital also they failed to introduce this instrument.

Our patient was badly poisoned at times from absorption of poison into the system, and he seldom was free from boils and sores. Also, when not taking tonics and blood-purifiers he would get badly run down and lose flesh. Under the microscope, the urine showed large quantities of pus, blood-cells, epithelium, and blood clots; bacteria were plentiful.

About two and a half years ago, he began to be troubled with acne on the face and neck. Despite all the treatment instituted, the acne grew worse, until his face was a sight to behold. At times his eyes were nearly closed by the swelling and I have removed necrotic plugs from his ears that left holes nearly through them. During all the many years this patient was under the care of different physicians, and although he was at the hospital twice, he never received more than temporary benefit.

For a year and a half this patient was in my hands and I put him upon tonics and urinary antiseptics and thoroughly saturated his system with calcium sulphide. By this

plan of treatment I did succeed in lengthening the time between attacks and in keeping his general health up toward normal; still it had very slight effect upon the severity of his renal attacks and none whatever upon the acne. In fact, the acne gradually grew worse. The aggravation of the acne at last determined me to try bacterins and I procured three doses of a reliable make of mixed acne-bacterins. These were administered at five-day intervals, with the result that after the third injection a slight improvement was observable. Thereupon I wrote The Abbott Laboratories, and they sent me five empty tubelets, which I was to fill with the discharge from the pustules and mail to them. From these they made cultures, which they divided into 24 tubes, representing 24 doses of autogenous bacterin.

Upon receipt of this autogenous bacterin, I began to administer a dose every five or seven days, according to the reaction produced. To my great joy, the acne began to recede almost immediately, and by the time the seventh dose was injected it had disappeared absolutely. Twelve doses in all were administered, and not only did the acne disappear, but every sign of sores and boils. Best of all, six months now have elapsed—yes, eight months—and there has been no return of the renal abscesses. The man's complexion now is clear, his health is perfect, he is free from pain, and works every day.

While I am writing this article a number of questions present themselves to my mind which I wish could be positively answered; namely: (1) Was the acne the result of the suppurative nephritis? (2) Will these renal abscesses form again, or is the condition permanently cured? (3) Would a bacterin made from cultures prepared from the pus of suppurative nephritis cure the disease if not complicated by acne?

Judging from the urethral strictures some physicians claimed that our patient one time has had gonorrhea; but this the patient denies, asserting that never since he can remember did he have any discharge from the urethra. Knowing the man, his habits and surroundings, as I do, I cannot bring myself to believe that he ever had gonorrhea.

If, however, the suppurative nephritis should have resulted from an old gonorrhea, would bacterins made from cultures of the same acne pustules cure the nephritis?

I should be glad to have the editor and readers offer comments.

C. W. CANAN.

Orkney Springs, Va.

[This is a very interesting case and we hope that readers of CLINICAL MEDICINE will comment upon it, as requested by Doctor Canan. From the description given us, it is impossible to decide whether or not the acne was the result of the kidney condition. Some light could perhaps be thrown upon the relationship of the two foci of disease by a careful bacteriologic examination of the pus discharged into the bladder. It is not at all unlikely that a mixed staphylococcus infection, of a somewhat generalized character, was present.

Of course, we do not know whether the renal condition will manifest itself again or not; but it may. The patient should be watched closely for some time. A bacterin made from cultures secured from the pus in the urine should prove of value; but again it is impossible to promise definitely that it would cure. Much would depend upon the freedom of drainage. A bacterin will not remove pent-up pus.

Finally, we suspect from the description of the case that at some time this patient was infected with the gonococcus; the presence of a stricture of the urethra certainly indicates the probability of such an infection. If the gonococcus is still present in the genitourinary tract, then a bacterin made from that organism (presumably in association with other complicating bacteria) should prove of value.—Ed.]

CORRECTION

Last month we printed an abstract of an article by Dr. J. A. Crisler, entitled "Local Anesthetic Used with H-M-C in 1000 Surgical Operations" (see p. 1102). We regret to say that through some oversight or mistake on our part, this article is credited to *The American Journal of Surgery*. It really appeared in *The Journal of the Tennessee State Medical Society*, July, 1914, p. 110. Our apologies to everyone concerned.

AN ANENCEPHALIC MONSTER: MATERNAL IMPRESSIONS

The last word about maternal impressions, or about "marking" a child during pregnancy, has not yet been spoken, and the question of its possibility bobs up as soon as the type of the newborn offspring deviates more or less from the accepted standard, or when fetal stigmata can be cited in connection with the psychic experiences of pregnant women.

It is said that the Greek women had sculptures, paintings or drawings of beautiful creatures in their rooms, and that this was the cause of the beauty of the race. If this is true, the remedy is easily applied; and I suggest a "September Morn" in every home.

Now for my case-report. I herewith present two pictures of a still-born child. Labor was normal and, as far as I could ascertain, life became extinct only a few minutes before birth. The back of the head was one bloody mass, without cranium, and when the child made its appearance I could not help thinking of a huge frog. The mother told me, and so did the father, that in the third or fourth month of pregnancy she had been frightened by frogs and I deemed it unnecessary to contradict their view in this case.



Anencephalic Monster—Front View

By the way, let me say that the "frog" type is a very common one, but only few of the mothers have had real experience with being frightened by frogs. This fact alone should give the theory of child-marking a very severe jolt. I have seen children perfectly resembling monkeys and thanked Moira (the Goddess of Fatalism) that it is only the exception. I would rather believe in the evolution theory of Darwin, that men formerly were monkeys, than to see men become monkeys once more.

D. ZWIGTMAN.

Niles, Mich.

[This child belongs to the teratologic type known as *anencephalus*. While these mon-

strosities are relatively common, and fall into a classification as definite, natural and simple as that of cabbages or beans, the idea still persists among the laity, and even among the profession, that the various anatomic



Anencephalic Monster—Side View

defects or duplications may be caused by maternal fright. There is no real evidence that they ever are so produced. Plenty of coincidences, to be sure, but no proof. Now I expect someone to tell me I am mistaken!—ED.]

NUCLEIN IN CANCER

In 1902, while I was engaged in general practice, a man 47 years of age applied for treatment, saying he had been treated by several of our most prominent physicians and surgeons for cancer, which was located about an inch and a half from, and on a line with, the outer canthus of the right eye. He had been told by each of these gentlemen that there was no cure for this type of malady. Feeling that there must have been provided a remedy for every ill to which man is subject, I began to wonder whether there was anything that would fortify the surrounding tissue against the further invasion of this rapidly destructive process, and then it occurred to me that nuclein, given intramuscularly, in association with iron and arsenic taken internally, might prolong life, if not effect a

cure. Upon his second visit and after I had explained my views, I offered to give him the treatment, provided he would keep it up for a period of not less than six months, if necessary. To this he agreed.

The following morning I took this patient before one of our most prominent physicians and surgeons, a man of more than a national reputation, who declared: "It is simply folly to waste time with what you know to be a hopeless task. . . . He cannot last three months," and more to that effect. This was very discouraging, of course; but, anxious to try out my theory, I undertook the treatment.

The patient was given his first hypodermic injection of 10 drops of nuclein solution on the 10th day of September, 1902; and these injections were repeated for two months thereafter on alternate days. He was also given iron, arsenic, and strychnine, internally. Arsenic was pushed to the limit of toleration. The surface of the cancer was washed off several times a day, cleansed with a solution of peroxide of hydrogen, dried, and then a cloth covered with carbolized vaseline was applied and kept on until the next dressing. Owing to the extreme rigidity of the muscles on this side of the face, the man could not separate his teeth, so that he was forced to live strictly upon liquid food, for eleven months. He was unable to get even gruel between his teeth, until after he was, apparently, cured. This gentleman now resides in England, is 59 years of age, and is in perfect health.*

Encouraged by the results in this case, I determined to try my plan in other forms of malignant troubles, and, so, a few weeks later, began the same course with another patient, a woman 36 years of age, who had five tumors in her right and three in the left breast. These were first noticed several years before, but they had given her no special uneasiness until about seven months ago, when darting pains were first noticed, radiating in all directions and apparently all coming from the largest "lump" in the right breast. Finally the constant loss of weight and strength and the increased pain drove her to consult a doctor. I carried out my resolve.

Daily injections of nuclein were given, also iron, arsenic, and strychnine. By and by the latter drug was discontinued, when her strength returned. The treatment was

*After this gentleman was thoroughly cured, I took him back to the surgeon who had examined him on the day before treatment was started, and he exclaimed: "Indeed, the days of miracles have not passed. This is really one of the most wonderful cures I have ever witnessed or read about."

continued for four months, when she was instructed to take the iron and arsenic for six days out of every ten, for a period of three months, and then report. She was discharged as cured ten years ago. Less than a week ago this lady came to consult me about a simple digestive disturbance. I examined her breasts and found them both perfectly normal.

After this I was determined to try this course out in uterine cancer, and my success has been more than encouraging.

One case, that of a very estimable little woman who had allowed her trouble to be neglected too long before consulting a physician—as so many women will do—was the most stubborn I have ever undertaken, with any hope of success. Her discharge was so offensive that her husband could not sleep in the same room. There was no noticeable change in her condition during the first month, but some signs of improvement were discovered a few days later, and she was discharged after five months of constant treatment. This woman was 35 years of age. She was emaciated and had a dry, wrinkled, yellow skin. Today, nearly four years since she was cured, she has a beautiful complexion, is strong, well and happy.

It is not deemed necessary to report fully all cases treated, nor will I refer to those treated within the past two years, all of which I am satisfied are permanent cures, but sufficient time has not elapsed to warrant me in reporting them as cures. I do want to say, however, that in these later ones I have been able to accomplish as highly satisfactory results, in a much shorter time, owing to the fact that I have administered the solutions intravenously.

For a good many years I had been employing the intravenous method of treating many chronic diseases and found that I could effect cures in a far shorter period of time, so that now I never resort to the hypodermic road whenever it is possible to employ the intravenous method. My experience with the intravenous method of administering solutions in malignant disease does not date back far enough to enable me to say definitely, but it is my belief that cures can be effected in about a third of the time required by the hypodermic method.

During the twelve years I have been engaged in this work, I have had the pleasure of seeing many cases of superficial cancer, cancerous tumors of the breast and uterine cancer cured. More than 90 percent of the patients treated during this time were cured prior to October 1, 1911.

It is my belief that many cases of supposedly incurable uterine cancer are curable, and further that many thousands of women could be saved from the semiinvalided state caused by the too early, and often needless, removal of the womb and its appendages, under the belief that this procedure is the only possible means of saving life. When the disease is cured under my method, the woman is left with all her organs intact, as nature intended they should be; and this is what we all should work for.

Nowhere have I found this line of treatment referred to since I began it in 1902, until Dr. J. M. G. Carter read a paper before the section on medicine of the Illinois Medical Society at Springfield, May 15-17, 1906, in which he reports 5 cases treated along the same lines.

Carter gave nuclein in the form of protonuclein, internally, also gave the bromide of gold and arsenic. His results were fine, especially in the case of carcinoma of the sigmoid flexure—first seen and diagnosed by Dr. J. B. Murphy. This patient was again examined by Doctor Murphy, after the cure was effected by Doctor Carter, and he declared the tumor had disappeared. One and a half years after the cure was completed, this patient was found to be in perfect health.

Doctor Carter further states that for a number of years he has used nuclein with such success as to lead him to hold it in high regard as an agent for the treatment of malignant growths and other low dyscrasias. Also, he writes: "I have more confidence in the nuclein than I have in the bromide, chiefly, perhaps, because I had two cures in which I did not use the bromide, while I have had none where nuclein was not used."

In an extract taken from a paper written by Doctor Ernest LaPlace, which I have seen, the latter says: "The real efficient treatment of cancer must depend upon altering the nature of the tissues, so as to make them resist or in other ways be unsuited to the development of what may be the cause of the disease; until such a preventive or alterative treatment is found, we must acknowledge that the treatment of the disease is still to us a hidden secret."

Doctor Albert S. Atkinson, in an article appearing in *The New York Medical Journal*, has this to say concerning the value of nuclein in the treatment of cancer: "I believe that other treatment would be valueless without help from this agent."

Among the various treatments heretofore advised, there is really none that has proven of sufficient value to warrant the belief that

they will cure all cases; yet, I firmly believe that the idea advocated in this paper, with possibly some modifications or additions, will prove successful in a greater percent by far than any treatment at present known, and I trust that I may be spared to carry on this work until my contention is proven to be correct.

It must be admitted that the cautery has proved too much of an irritant. Caustics have proven valueless, except in cutaneous carcinoma, and a very large percent of these recur in from six to twenty-four months. Electrolysis is only transient and questionable in its results. The effects of serum treatment are as yet very doubtful. Radium is believed to be useful in most dermatoses, but was stamped by Doctor Rodman of Philadelphia, in his address at the meeting of the Southern Medical Association (held in Richmond last week), as a failure. Other authorities make the same assertion. The value of the x-ray has long ago been declared by many of most observant specialists to be worthless. Many of our very best surgeons agree with Czerny, of Heidelberg, that "surgery can never be an ideal cure." So that, after all these years, we must agree with Prof. F. C. Wood that "the attempt to cure cancer with drugs is, after all, the line on which we all are working."

My only excuse for not presenting these views before is, that every great and worthy advance that has been made in the enlargement of human knowledge invariably is looked upon as a daring innovation or as a fake; and, too, doing my work quietly, without assistance, and being forced to depend upon those who were inclined to come to me through the advice of the few whom I had treated, the number of my cases was limited. If I could have had the advantage of advertising, which many men enjoy, especially those connected with some medical college, I might have had at my disposal more clinical material and, thus, carried my investigations further. Still, I feel convinced that my total results could not have been better, having succeeded in more than 95 percent of curable cases.

BOYCE D. BROOKER.

Richmond, Va.

WHY NOT SUPPRESS ALCOHOL ALSO?

From your November number I learn that the Harrison Antinarcotic bill has finally become a national law and goes into effect March 1. A good law, and for a good purpose. But why, oh why, did not The

American Medical Association and *The Journal of the American Medical Association* include the use of alcohol in their bill? They know, and all doctors know, that alcohol destroys scores of human lives to every death that can be attributed to the excessive use of narcotics.

[The American Medical Association did not frame this bill.—ED.]

I have practiced medicine for more than fifty years, but can recall not more than one who lost his life from the excessive use of narcotics; while those whom I have known to come to an untimely and disgraceful death through excessive use of alcohol are legion.

In order to make an intelligent comparison of the two evils under discussion, I have made a canvas of the proprietors of the drugstores of our city as to the number of persons whom they know to be habitual users of narcotics. Not one of them told me of more than three such persons. They also told me the names of the persons, which proved them to be regular "rounders," and showed plainly that there are not a half dozen persons getting opiates in this town of 12,000 inhabitants, to be used to satisfy a habit.

In contrast with this, we have 27 licensed thirst-parlors, to say nothing of a large litter of "blind pigs," all of which are very "wet" and doing a thriving business. It would take at least 4000 customers to keep all these places in business. This makes it look as though we have only one individual addicted to the opium-habit to 1000 addicted to the alcohol-habit.

Strange as it may seem, our state and national boards of health seem to be equally blind to the ravages of King Alcohol. For, while everybody else knows of the enormity of his death-toll and of the fact that William E. Gladstone, England's most illustrious prime minister, has said that "alcohol destroys more human lives than war, famine, and pestilence combined," still they are as silent on the subject as the sphinx.

Our boards of health, both state and national, make frantic efforts to stamp out hog-cholera and the foot and mouth disease of cattle—which is all right—but how passing strange that the lives of hogs and cattle should be so much more important to them than the mighty army of men who are continually passing down and out by the alcohol-river route. It is a shame that all these, who are leaders in the medical profession and in society, are simply afraid to express themselves upon this subject.

The trouble is, that they who become addicted to the alcohol-habit will fight for the

man who sells them the booze, and against the one who opposes him, even to the most ruinous boycott. Added to this is the fact that the government gives its permit to carry on the nefarious business, that there are many millions of capital back of it, and the most important additional fact, that its supporters and friends *have the vote*; all of which makes it a rather dangerous enemy to tackle.

If the hog-cholera and foot-and-mouth-disease germs all had votes at the general elections, they, too, would be immune from board of health attacks.

W. W. HAUSER.

Lincoln, Ill.

[Well said, and I have much sympathy with the position taken by Doctor Hauser. While I hope to see the improper use of narcotic drugs completely suppressed, as a matter of fact I believe that the number of drug habitues in the United States has been considerably exaggerated by some enthusiastic advocates of repressive legislation. Basing their conclusions upon the census of drug users made in Tennessee, the Bureau of Drugs, at Washington, has recently placed the total number of these unfortunates at approximately 70,000. A very large proportion of these are undoubtedly recruited from the negro population of the South and from the denizens of the red-light districts of our great cities—the weak and depraved who most readily fall victims to cocaine and similar drugs.]

As Doctor Hauser so ably states, it seems that alcoholic immunity to legislative attack depends largely upon the political influence wielded by *the business*. Nevertheless, the doom of King Alcohol has been sounded, as witness the passage of several state-wide prohibition laws at the last election and the wiping out of the sale of liquors in Russia by a stroke of the Czar's pen.

But to return to the Harrison bill: It certainly will interest Doctor Hauser, and many others, to know that the United States Public Health Service has quite recently suggested the modification of the federal antinarcotic bill (now a law) so as to provide for records of sales of alcoholic beverages and medicinal preparations containing alcohol. We quote from a recent statement:

"In the Harrison Antinarcotic Bill now pending in Congress it is proposed to license druggists and others as dealers in narcotic drugs. This feature of the law will establish a precedent that should make it easy for retail druggists to secure an extension of the class-

ification and provide, for a class of dealers in alcohol and narcotic drugs, the requirement that dealers in this class keep a record sufficient to show the amount of alcohol or alcohol-containing drugs purchased.

"A provision of this kind would serve to locate all dealers in alcohol and alcoholic liquids for medicinal or mechanical purposes, would suffice to class them apart from dealers selling alcoholic liquids for beverage purposes, would practically preclude the sale of alcohol for beverage purposes under the guise of medicine, and would afford to officials in prohibition or local-option territory an opportunity to enforce this type of legislation in a way hitherto impossible."

This suggestion on the part of the officials of the Public Health Service seems to me excellent, and I hope that the physicians of this country, who can wield a terrific legislative force, if they are only determined to do so, will get behind this idea, and push it hard. The columns of this journal are open for its promotion.—Ed.]

ORDER THE INDEX FOR 1914

Every reader of CLINICAL MEDICINE who binds his copies—as every reader certainly should—is requested to let us know at once, by postcard, so that we can send him a copy of the Annual Index. For several years past we have not bound the index in the December issue of the journal, for two reasons: First, because it is quite difficult to complete it in time for the December number and do the work as perfectly as it is our aim to do, and, secondly, because we want to utilize the space that would be taken up by the index (from 24 to 32 pages), for reading-matter. However, we shall be delighted, in fact are anxious, to supply the index separately entirely without charge to anyone who is interested enough to ask for it. We urge you to send in your order at once—a postal card will do; being careful to write the name and address as plainly as possible.

SOME THERAPEUTIC SUGGESTIONS FOR AMERICAN DRUGS

Lloyd advises sanguinarine when there is tickling in the larynx, with burning, membrane red and dry; cough hard, secretion scanty, hard to raise; dose 1-32 to 1-16 grain every two or three hours.

According to Waugh, the indication for sanguinarine is the necessity for more expulsive power in coughing and greater sensitive-

ness of the respiratory tract; as, for instance, in old persons having bronchitis, or in young infants, when there is danger from the collection of secretion in insensitive bronchial tracts.

Lloyd suggests *phytolacca* in throat affections when there is: membrane pale, ashy-gray; lymphatics enlarged; fever present. It may be used both locally and internally. *Phytolacca* is best known as an effective stimulant of lymphatic absorption; in mastitis, adenitis, and other glandular affections; and for obesity.

Lloyd advises *lobelia* when there is profuse secretion in the throat, dyspnea and oppression. Dose 1-6 to 1-3 drop of the specific medicine every half hour, until relief. Since *lobelia* resembles emetine in stimulating mucus secretion, the foregoing is strictly a small-dose effect. Relief probably comes through the vascular relaxation that ensues if the drug is pushed to nausea.

Since *lobeline* stimulates mucus secretion, it is indicated in the early stages of catarrhs, to loosen and relax the swollen tissues.

Lloyd looks upon *collinsonia* as a specific for the chronic laryngopharyngitis of public speakers—clergymen's sore-throat. A drop of the specific medicine every hour is the remedy.

Collinsonia is unknown to the compilers of *materia-medica* textbooks. The green plant is emetic in very small doses. It has some repute in menstrual disorders, as a general regulator, probably because of its relaxant properties. It has been praised in gravel, hemorrhoids, anal pruritus, catarrhs, varices, and in general as a digestant tonic. It is considered a tonic to the blood-vessels and muscular fiber. Shoemaker verified its antispasmodic powers and valued it, with aconite and morphine, above all other remedies in acute cystitis. He prescribed it for incontinence of urine in children, and when after urinating a few drops of urine remained, to soil the clothing by passive escape; also, for late stages of gonorrhea, for leucorrhea, and prostaticorrhea.

Lloyd recommends *drosera* for dry cough, with tickling in the larynx, and reddened mucosa; give 1-2 drop of the specific medicine every hour. Waugh does not mention *drosera*, finding nothing about it in any except Eclectic works, and those statements too vague and uncertain to indicate the real virtues of the plant.

Plantago major, the common plantain, was highly prized by Beach as a remedy for venomous bites. Lloyd pronounces it "al-

terative, diuretic, antiseptic, astringent, anodyne, and demulcent. Indications: Diseases of the gastrointestinal mucosa, with pinching or colicky pains; dermatoses, with prickling, itching or burning pain; toothache and earache." It also is employed as a tonic to the vesical sphincter for children. The dosage is uncertain; Lloyd names 1 to 10 drops, but says the usual doses are 1-3 to 2-3 of a drop. There is a decided tendency toward Homeopathy in the Eclectic dosage and indications.

Kalmia latifolia, the mountain-laurel, is used for syphilis, but scarcely can replace salvarsan, without better evidence than has yet presented. Like most eclectic remedies, it is advised in a multitude of nonrelated maladies—fevers, inflammations, cardiac maladies, active hemorrhages, diarrhea, dysentery, jaundice, neuralgia, and very painful ophthalmias. Kent gave it for the pains in the left arm attending valvular heart disease.

Mangifera indica is recommended in hemorrhages before, during or after parturition; especially for passive bleeding.

"W."

THE SULPHOCARBOLATES IN TYPHOID FEVER

In my private practice, I had learned to rely upon the sulphocarbols as an intestinal antiseptic and had used them with success in typhoid fever, so that last fall, during an epidemic of that disease in a state institution where I was assistant physician, I employed them with entire confidence and with what I consider gratifying results.

As soon as a patient presented symptoms of typhoid fever, I gave calomel, followed usually by castor-oil; then, when the colon was unloaded, I began with the sulphocarbols, giving 5 grains every two hours day and night, when the patient was awake, while sometimes I prescribed 5 grains every hour for a few days in the beginning; however, never waking any patient for his medicine. As most of the cases were of the constipated rather than of the diarrheal type, I ordered castor-oil every second day.

For nourishment, I gave broth, a small amount every three or four hours; at times giving also a little ice-cream. Formerly I used to prescribe a small amount of milk every three hours; and, in fact, I believe that in protracted cases it is good policy to do so, as the milk is needed to keep up the patient's vitality.

Whenever the temperature went above 102.5°F., I sponged with cool water; in cases

where the temperature went above 103°F., I used ice-cloths and applied an ice-bag to the abdomen.

Almost all of the inmates and most of the employes had had the typhoid vaccine the summer previous to the outbreak, so that a good many of the persons who came down with typhoid fever had been vaccinated; but my experience is that, when vaccinated persons contract typhoid fever, the course of the disease and the ultimate outcome do not depend upon prophylactic vaccination, but upon the treatment carried out in each individual case. This means that the typhoid suspect be put to bed immediately and kept there until the fever is over, regardless of any vaccination.

The only fatal case I had was that of a young man who had been vaccinated but who was allowed to go about his work in that tired, run-down condition that so often is the forerunner of typhoid fever; too great reliance being placed upon the vaccination.

There were several patients whom I treated, whose temperature was elevated in the beginning, but all responded to treatment. I had one particularly trying case, that of a young man employe, about twenty-six years of age, who became sick a few days before Christmas, and who was not up again until the following March. He was a robust, healthy young fellow, but walking around with a temperature of 103 degrees, this later rising to 104 degrees. This man had not been vaccinated.

I didn't have the sulphocarbolates in the beginning, and, so, used salol until I could get a supply of sulphocarbolates. There were many disturbing factors that tended to a mental unrest—always a serious menace in typhoid fever. At about the third week, there was a hemorrhage of moderate degree. I gave powdered opium and lead acetate, placing the patient upon his back, enforcing absolute quiet, and restricted the diet to a few spoonfuls of broth for the first twenty-four hours. I followed this treatment with larger doses of bismuth subnitrate, hoping to coat the inflamed intestine; also placed an ice-bag upon the abdomen.

This patient would not use a bedpan, and the hemorrhage occurred while he was on the slop-jar, following a dose of castor-oil. The hemorrhage occurred about noon of a Monday. I didn't try to move the bowels again until Saturday forenoon, when a full dose of castor-oil was given, and with satisfactory results. During this week there was considerable tympanites, that was relieved

some by inserting a high rectal tube and allowing it to drain into a bedpan. This was followed later by enemas of soapsuds and oil of turpentine, to relieve gaseous distention. When given but once a day (preferably in the evening, to promote rest), I ordered for a short time three tablets of the sulphocarbolates every two hours; crushing the tablets and giving with them a small amount of bismuth subnitrate.

The heart remained good during the greater part of the disease, averaging from 80 to 90 beats, and of good volume. I think I had to contend with reinfection from the gall-bladder; for, while in the beginning of February the patient had a temperature of 100°F. in the morning, with corresponding evening rise, it suddenly jumped to 103 degrees, going to 104, with a pulse of 100 and weak and compressible. This occurred twice, when the same routine was being followed, so that I can only attribute it to gall-bladder reinfection. Small doses of strychnine were given during this period, also whisky, egg-nog and malted milk, the patient's vitality being very low. It surely was gratifying when all danger of relapse was past. The diet in all my convalescents was most carefully guarded.

C. EDITH MAXWELL.

Rockland, Ida.

THE ASSOCIATED SYMPTOMS OF TUBERCULOSIS

It is passing strange how accurate most general practitioners are in the diagnosis of infrequent and rare diseases, and, yet, how dull they are in recognizing tuberculosis, the most common of all diseases.

Our doctors can diagnose cancer of the stomach, although they never saw one; an aneurism, though they can observe only the symptoms; appendicitis, by the associated symptoms; gall-stones, by the clinical history and the symptoms; meningitis, not by seeing the germ, but only by the symptoms; gonorrhea, not usually by the gonococcus, but by the symptoms; diphtheria, not by a bacterial diagnosis but by the membrane and the symptoms. They recognize croupous pneumonia and bronchopneumonia and make a differential diagnosis, not by the germs but by the associated symptoms; malarial fever, not by examining the blood for plasmodia but by the symptoms. And thus on and on. But when it comes to tuberculosis, the commonest of all the diseases, the physician wants to wait until his patient begins to break down

and spits up the germs, so that he may see them under the microscope, before making his diagnosis.

If our works on practice and our medical teachers fail to do their duty on this subject, authors and teachers should awaken to a sense of their duty and should see to it that the early diagnosis of tuberculosis is clearly described and thoroughly mastered by the student.

Away back in the nineties, in his *Journal of Tuberculosis*, Dr. Karl von Ruck gave us such a comprehensive and accurate pen-picture of the associated symptoms of tuberculosis that it never will be surpassed, and should become a classic. By these symptoms one can see and recognize tuberculosis afar off, and as a rule not even a physical examination is necessary for a certain diagnosis; nor need the tubercle bacillus be demonstrated in the sputum or other secretions.

The physical and the bacterial diagnosis are merely confirmatory of the associated symptoms, and, with all three positive, you are three times certain of your diagnosis. But never should you wait to "see the germs" for a diagnosis, for they are only confirmatory, and not necessary any more than seeing the pneumonia-germs, while, moreover, your patient may be over the dead line before you find the pneumococci.

The knowledge of these associated symptoms has proven so valuable to me that I repeat them here for the benefit of those who may not be familiar with them. In their totality, the symptoms are so complete, so comprehensive, and, yet, so plain and simple that no physician or even a layman can make a mistake in his diagnosis without ever confirming it by a microscopical examination.

Here are the symptoms:

1. Pallor.
2. Often bad color of skin.
3. Below normal in weight or excessively over weight.
4. Easily fatigued.
5. Indigestion.
6. Torpid liver.
7. Sluggish bowels.
8. Nervousness.
9. Nervous, irritable or weak heart.
10. Easily taking cold.
11. Slight hacking cough.
12. Catarrh.
13. Sleep poor, not refreshing; getting up tired in the morning.
14. Easily becoming hoarse.

Taken separately, these symptoms mean no disease in particular and may be found

in various affections; but, taken collectively and finding the majority or all of them associated in one person, they mean but one thing, and that is, tuberculosis. Not every time may you locate the spot, but you are dead sure that it is somewhere in that individual; it may be in the lungs, lymphatics, bones or in the peritoneum.

Let me repeat: whenever you find a greater number of these symptoms associated you can be absolutely certain of tuberculosis being present; and you need go no further.

But usually you may very easily confirm your diagnosis by a physical examination. If the patient has a cavity, his sputum will carry the germs and further confirm you—but don't wait to see the germs in order to make your diagnosis, no matter what may be the trouble with your patient.

Von Ruck's pen-picture of the associated symptoms always bobs up between me and my patient and with it clearly before my mind, I am the better able to grapple with the present trouble and to guide my patient back to health. Since I studied the article in the *Journal of Tuberculosis*, it has been so clear to my mind, that it is really a part of me. It has been so valuable to me in my general work that I repeat it as best I can, and I urge upon the profession its study and appropriation as of great value and importance.

The great beauty of the associated symptoms is, that they are equally useful and applicable to all forms of tuberculosis, in all the stages, and in all locations, whether it be tuberculosis of the lungs, lymphatics, bones or peritoneum.

B. F. TERRY.

Rising Star, Tex.

[Doctor Terry's article was submitted to Doctor Achard, of our editorial staff, who makes the following comment:

"Doctor Terry for quite a long time has urged both Doctor von Ruck and me to republish these associated symptoms of tuberculosis, upon the recognition of which he justly lays so much stress for the early diagnosis of tuberculosis. At my request, he finally consented to say his own say, and I can only confirm his opinion of the importance of these symptoms, if in a given case they are present collectively or in the larger proportion.

"I believe that nowadays comparatively few practitioners wait to find tubercle bacilli in the sputum before making a diagnosis of pulmonary tuberculosis. It is recognized that, when these actually appear, the lesion already is an open one; the diagnosis then is

one of phthisis, and no longer that of simple tuberculosis.

"For all that, the importance of heeding the early symptoms described by Doctor Terry and of acting upon the indications suggested by them, cannot be overstated. During the early stages of pulmonary tuberculosis, when no complications exist and when no, or but little, tissue has been destroyed, the restoration of health generally is a comparatively simple matter, and it is here that specific treatment by means of a vaccine (not "tuberculin") that contains all constituents of the tubercle bacillus promises the best results.

"Once a bacterial diagnosis of sputum is positive, the problem becomes much more difficult. I, therefore, endorse Doctor Terry's enthusiastic description of what the associated symptoms of tuberculosis may mean to the practitioner and recommend their careful study and observation."—ED.]

A "FAIR EXCHANGE": AN OFFER OF FREE SERVICE

I have had a real treat recently. Our friend and frequent contributor, Dr. A. L. Nason, of Maben, Miss., sent us a sample of genuine cane-syrup. Everyone in the office had a chance to taste of it, and the result was so gratifying that we have chipped in among us and ordered a full barrel. Another friend of ours, Mr. L. Galloway, of Province, Oklahoma, sent us some pecans. These, also, were sampled by our boys and girls and pronounced good. Result—an order for 500 pounds.

These two experiences have been so satisfactory to us and, I hope, to these two friends, that someone has suggested that I print their names in CLINICAL MEDICINE and give others a chance to get some of this good homemade syrup as well as those delicious pecans. Also, the suggestion has been made that there be opened in the columns of CLINICAL MEDICINE an opportunity for exchange between doctors in different parts of the country. For instance, some Florida physician may want to dispose of his oranges direct by mail. A Connecticut man may be interested in the manufacture of jackknives; a California physician in olive-oil or walnuts; an Oregon or Arkansas man in apples; a Wisconsin physician in seed potatoes; a Vermonter in maple-syrup; a Texan in rice. Why should not these different men arrange for an exchange of commodities, either for money or other things they may want, thereby cutting out the middle man, to their mutual advantage.

Just to give this idea a trial, we will publish free in the next few numbers of CLINICAL MEDICINE, in a column especially provided, any offerings of this kind which subscribers may feel like submitting. Of course, there must be a limit. If we are snowed under with requests of this kind, it may eventually become necessary to make a small charge for this service; but for the present we offer it free, for the good of the "family."

HOLD FAST TO THE OLD

I do not believe the profession, as a whole, recognizes the great value of religiously preserving and filing away all their medical journals. The men are eternally looking for the new. Its the same way regarding new remedies. "Bark is a good dog, but Holdfast is a much better one" applies in the practice of medicine as well as in other things.

One well-tried remedy is worth a dozen or more of the other kind, until their worth is well proven—and private practice is not exactly the field to prove them in, either.

My associations with my old files of THE ALKALOIDAL CLINIC and THE AMERICAN JOURNAL OF CLINICAL MEDICINE are very pleasant, for I am always finding something new in them, and, then, again, the *truth never gets old*—even in medicine.

Tulsa, Okla.

A. H. COLLINS.

[There's a world of good advice in the doctor's suggestion. I would rather have a carefully indexed ten-year set of bound volumes of CLINICAL MEDICINE, and of one or two other good journals, than any medical encyclopedia ever published. You can find more of the kind of stuff that will actually *help* you in these volumes than you can in a whole case full of text-books.—ED.]

EMETINE IN PYORRHEA

I am using emetine hydrochloride in pyorrhea, hypodermically injected in the subcutaneous cellular tissue; giving 1-2 grain daily for three successive days, then every fourth day until the gums are entirely healed and the teeth become tightened in place. I also employ it locally to the pockets and walls of the pockets by means of a syringe, using a 1-2 percent solution. The patient is directed as to the care of the mouth and teeth along prophylactic lines and told to wash the mouth after every meal with a good antiseptic wash, followed by a few drops of fluid extract of ipecac, applied to the gums

and teeth by means of the toothbrush. The permanency of the effect is due, I am sure, to the fact that the pyorrhea-pockets are treated locally until they heal.

Instrumentation is absolutely necessary in every case. Tartar scales must be removed. Ill-fitting bridges and crowns must be removed and projecting fillings must be polished smoothly to the tooth before the general treatment is begun, in order to do away with all conditions that tend to produce irritation and prevent granulation.

I believe emetine saves me much time in treating my cases. While it is too early to make a very definite statement as to permanent cure, the results I am having with a number of cases under my observation are gratifying, and there seems to be good reason for believing that cures can be effected in at least a certain proportion of the cases.

J. R. RICKLE.

Houston, Tex.

[This short report is from a dentist, and it is one of several from men who have tried emetine in pyorrhea and been pleased with the results obtained. That it will actually cure the disorder is proven. That it will cure every case, of course, is not proven; still, emetine seems to be the best thing we now have for that purpose. Local treatment is required for loose teeth, receding gums, and inflamed pericemental membranes. Bass reported benefit in 100 cases treated with emetine, given in 1-2 grain doses hypodermatically; and many of these were quickly cured by this remedy in a really remarkable fashion. Read his report, published in *CLINICAL MEDICINE* last month. See page 1106.—ED.]

ANOTHER JOLT FOR THE DISPENSING PHYSICIAN

In a letter written to *The Dallas (Texas) Morning News*, a copy of which has been sent us by one of our subscribers, Mr. Walter D. Adams, President of the Texas Pharmaceutical Association, refers to "the dispensing evil" in the following language:

Then there is another evil, possibly not so germane to the subject under discussion, still it is a contributing cause to the evil; that is, the dispensing physician. Is not the incentive greater to prescribe habit-forming drugs if the physician dispenses his own drugs and gets the extra profit from them? First-aid remedies, such as calomel, quinine, and so on, can safely be left for physicians to dispense on call, but the best interest of the public demands that at least all poisons, or prescriptions into which any poisons or narcotics enter, shall be dispensed only on written prescription

and this filled by a licensed pharmacist, preferably someone other than the party writing it. A careful pharmacist is sometimes a safety check between the physician and the undertaker. I know by my own experience that I have detected errors that would have cost the life of the patient if filled as written. If the prescription is on file, the medicine dispensed must respond to an analytical test if necessary and it is possible thus to trace the mistake and locate the blame. If a physician dispenses his own medicine to his patient, treats the case and writes the death-certificate, where is there any check upon the incompetent or malicious? That there are some reputable physicians who do their own dispensing is not sufficient reason why dispensing should not be regulated, so that the acts of the dispenser may be subject to inspection.

So, there are "some reputable physicians who do their own dispensing!" That is something conceded, anyhow.

We wish to commend much that Mr. Adams says with regard to the necessity for control of the sale of the narcotic drugs, especially by peddlars. More rigid regulation is desirable; yet, we would warn the physicians of Texas and other states to be on the lookout for legislation affecting their interests. In new state legislation the recently enacted federal narcotic law may well be used as a model.

PLEASE NOTE THIS

Through an oversight, a portion of the form containing the war pictures in this number was run with the "copyright notice" omitted. As soon as this came to the editor's attention he had the matter corrected. However, please remember that all these pictures were supplied by Underwood and Underwood, New York, and being copyrighted, cannot be reprinted without their permission.

SOME USES FOR ACONITINE

A demonstration of the efficiency of the chemically pure and definite active principle of aconite, as against the uncertainties of any tincture of this drug, is easily possible to any clinician. The confidence which results from a little experience with aconitine is comparable to that felt with hypodermic medication, and that is not possible with tinctures.

The perfect safety of this alkaloid in careful hands is beyond question, as after millions of doses used not a single report has come to us of any accident or any danger from its intelligent use.

In that extensive class of pathological conditions demonstrated in part by fever, acon-

itine hydrobromide is the remedy of choice—dependable, accurate, certain, and safe, whatever the patient's age. Remember Shaller's Aconitine Rule for Children: one granule (gr. 1-800) for each year of the child's age, and one extra "for the glass," dissolved in 24 teaspoonfuls of water; the dose of this solution being one teaspoonful every ten to sixty minutes.

After the initial bowel movement, one granule (gr. 1-800) at 20-minute intervals, for 3 or 4 doses, will cause sweating and consequent cardiac rest; this resulting in a fall of blood pressure and pulse rate. Aconitine will restore circulatory equilibrium and positively reduce a pathologic pulse of 140, thus saving 30 to 40 beats per minute and so conserving the body resistance.

After the first evidence of response to aconitine following the frequently repeated doses, you maintain this effect by the less frequent dose, say, at hourly intervals.

To abort a cold, nothing is better or more accurate in medicine than aconitine to restore circulatory equilibrium. A sudden local congestion signifies a compensatory anemia elsewhere, and, so, relaxation of vascular spasm is the one object of treatment.

Vasomotor spasm usually accompanies neuralgic pain, and this frequently is dissipated by aconitine through its power of relaxing the spasm and relieving the congestion. For this purpose we frequently depend upon aconitine ointment, making incision with a gloved finger, to protect the operator.

In cardiac hypertrophy, where treatment is indicated, aconitine will overcome vascular tension and thereby relieve the overtaxed heart. Here, of course, the dosage must only be just enough, and not the frequent dose required for acute conditions. An irritable heart is restored to balance by this alkaloid to a nicety not obtained by the guess-work therapeutics with the corresponding tincture.

While the single active principle meets indications never even approached by galenicals, we find that most often pathologic conditions are associated. Spasm of one set of vessels means corresponding paresis elsewhere. Congestion here means dilation there. Hence it is that the active-principle triad known as dosimetric trinity is so uniformly dependable. It contains aconitine, digitalin, and strychnine. Aconitine dissipates the tension of the congested area, strychnine adds tone to the area of relaxation and increases the respiratory excursus. While digitalin supports the heart and is somewhat antagonistic

to aconitine, this is not sufficient to eliminate its antiphlogistic action. This is attested by the fact that the combination has been successfully prescribed by physicians since it was first introduced by Burggraave in 1850.

While aconitine is indicated in any inflammatory condition, the only contra-indication to be considered is cyanosis. If this is present in the lips or fingers, the remedies indicated are, digitalin, caffeine, or strychnine.

Inasmuch as cyanosis practically never is seen in the early stage of pneumonia, pleurisy, peritonitis, or acute rheumatic fever, we can safely depend upon aconitine or the dosimetric trinity without fear, yet, with an assurance of results that imparts a confidence certain to insure success.

Chicago, Ill.

FRANK B. KIRBY.

ON TREATING SCIATICA

In your comments upon Doctor Stanton's little article on sciatica, printed in the November number of *CLINICAL MEDICINE*, you say that "croton-oil is pretty energetic treatment."

Sure, and sciatica requires energetic treatment! I have heard a patient of 225 pounds' weight cry like a babe because of the agony, and this big fellow swore like a fiend when I struck the nerve with the point of my hypodermic needle. An old medical friend once described sciatica as being like four hundred toothaches. But, no, I have had one toothache, and if sciatica is like four hundred such horrors I surely should die under an attack.

Where'er that place be priests ca' hell,
Whence a' the tones o' mis'ry yell,
And ranked plagues their numbers tell
In dreadfu' raw,
Thou, Toothache, surely bear'st the bell
Amang them a'!

Sciatic pain is terrific, still, it is not so acute as a full-fledged toothache—not so sharp or agonizing. If it did equal only four toothaches, no mortal man could endure it. I have had sciatica, but not exactly as other men describe it; however, I was—and I am—quite well satisfied with that one experience. It seemed as if someone were breaking my tibia across his knees. Bad enough, yet, not the piercing, darting, agonizing, atrocious pain from an exposed dental nerve. Burns gets it about right. (*Vide supra.*)

How do you know sciatica? Lumbago, nephritic pains, and backache—all frequent the same region. As you know, the sciatic nerve is given off from the spinal column in

the lumbar region and, so, a doctor may be mistaken in his diagnosis. This is how I tell: I ask my patient whether the pain passes down the leg, along the path of the sciatic nerve. The patient may be directed to lie on his back. Then, if the thigh is flexed against the abdomen and the fore-leg upon the thigh, if the trouble is sciatica a quick pressure upon the leg will elicit intense pain at the point of exit of the nerve from the pelvis.

Now, what shall we do about it? Cure it, of course—if we can. I always have accomplished this; still, should I fail in my attempt, it would be no more than has been my lot in the case of other diseases, yes, no more than has happened to you. So, be not discouraged when you do fail.

Now, a cure may have been made public and been known to others for a long time, while this or that doctor may again discover the same himself. In that case, the latter is entitled to as much credit as is the man who first promulgated it. In other words, he is an original discoverer of the cure. As for myself, I have discovered that active purgation will cure sciatica of a certain kind.

Some time ago, a patron came to my office and said that he wished some more of those cathartic pills.

"Why?" I demanded.

His reply was:

"They cured my sciatica."

Several times he thus called for these cathartic pills; also, several of his neighbors have similarly called for them. I have had several happy experiences with this treatment. Unloading the bowel frequently does this work.

My usual method of treating sciatica consists in injecting 15 or 20 drops of chloroform down to the nerve, and once at least this treatment has effected a cure. In addition, I have had decidedly good results from strychnine and phosphorus, taken internally.

A man was standing on the edge of a high cliff when a terrific pain caught him in the hip-joint. He managed to catch hold of some projection and thus saved himself from falling to sure death; but he often thought it would have been better had he gone down, for the suffering from the sciatic pain was so intense. For three months this man was treated for rheumatism by other physicians, who gave him salicylates. Finally I was called in and administered the chloroform injection, made near the exit of the nerve from the sacrosiatic foramen. The pain recurred at the mid-thigh, and after an injection made there it made its appearance under the knee, and still later in the gastroc-

nemius muscle; however, after several treatments it disappeared entirely. It was a happy day for Tom when he was cured at last, and he promised to pay me \$50. However, I'm still waiting.

Mosheim, Tenn.

M. G. PRICE.

CURRENT COMMENT BY A COUNTRY DOCTOR

Difficulties of the Old Doctor.—November CLINICAL MEDICINE opens with an article under this head. It is a timely subject well treated. The difficulties certainly are there; and they are a serious matter to the old doctor, just as they will be to the now young but soon to be the old doctor, and the back number if he does not keep in the vanguard of progress.

The old darkey preacher's sermon title, "De Sun Do Move," has become almost a classic. This old and illiterate negro summed up in a few words the fact that everything moves along on evolutionary lines. The "Bonny Brier Bush" and the "One Horse Shay" heroes still have their places. Places in literature commemorate the noble men of a past epoch of medicine. But this is the day of ductless-gland physiology, of anti-toxin, of active principles, and of accurate dosage.

Because the most rapid change of ideals as well as advance in science which the world has yet seen is upon us, are the older men to be allowed to live in the past and use the obsolete armament of a former day? No! The people just will not "stand for it." "Old Doc" is all right as a subject for fireside evening reading, but in practice the populace begins to demand the man who counts a few blood-corpuscles, boils a little urine or uses a microscope, as the case may be, to make a diagnosis, and then takes a straight up to date therapeutic-rifle shot for the center.

When the writer was a boy, he possessed an old single-barrel "smooth-bore" shotgun, a cut-over muzzle-loading musket. It was loaded by pouring in a handful of powder, ramming down a portion of a newspaper, dumping in a handful of shot—quite likely treated with castor-oil to make them "carry"—then following with a "slug" or another part of the newspaper, and lastly placing a percussion-cap on the nipple. This weapon was the pride of its owner's heart, and he viewed "brich-loaders" with a considerable degree of suspicion, it being currently reported that they "spat fire." He still claims that it was a good gun; but what backwoods

boy of today would want to own that antiquated thing?

Also, only a few years ago the knowledge of the ductless-gland riddle was almost limited to the fact that the suprarenals were subject to some sort of change in Addison's disease and that the thymus gland disappeared in adult life. The muzzle-loading shotgun prescription must go, but there seems to be no reason why the Old Guard should go with it. The veteran has the advantage, if he will but adapt himself to the modern tools.

It is said that a certain sea-captain and his first mate were two of the ablest men who ever took a "windjammer" around Cape Horn. The days of sailing-craft passed. The winds and currents still operate under the same natural law. The fixed stars and the sun still serve to take observations by. The old master mariner, however, is the proprietor of a few lobster-pots and a leaky sloop. Most of his time is spent telling the glories of the skysail yard-clipper he formerly took around Cape Horn and in criticism of modern seamanship. The mate? Oh! he kept up to the minute, is sir, instead of mister, clean up to the bridge and can perform a valid marriage ceremony outside the three-mile limit; in other words, he has command of one of those complicated machines known as an ocean-liner.

Comparisons being odious, here is a parallel. Doctor Progress and Doctor Foggy started in about the same time. Even the definition of an acid has changed since either went to school. Only one branch of medicine remains the same, anatomy, and Doctor Progress bought a dollar quiz-compend when he found himself getting rusty on it and carried it in his pocket a while, so that he can now once more bound Scarpa's triangle. He has kept up to date and, without being a faddist, has followed the current of medical advance. Just as soon as anything seems worthy of further investigation he gives it his closest attention. Instead of narrowing down to a few medicines, he uses more and more. In fact, he multiplies the good old nux vom. by strychnine and brucine, and again by diverse acid radicles.

Doctor Progress is mighty glad the new doctor has had better training than he, much better at school; but he has had the bedside work of years and in any emergency is right there with the experience and hypodermic syringe. In fact, he can rely on pulse, reflex, and respiration, instead of upon didactic dose-training. He is pleased to meet the

young doctor in consultation and enjoys so doing, likes to borrow a bit of his bright recent polish. Doctor Progress does not intend to move, but, if he does, he could probably rub up a few technical branches and get past the board, even if he does believe that his years of practice should entitle him to reciprocity. The doctor knows he cannot be here always and has no hard feelings against the next generation, but he is able to prepare for competition, and will do so in a dignified and honorable way. In other words, Doctor Progress is an up to date man. If he cannot afford as much as he would wish in the post-graduate line, he has sense enough to spend a few dollars for new books and medical journals, feeling that he gets his money's worth in the pleasurable pursuit of the advancing flow of scientific thought as well as in dollars and cents.

As for Doctor Foggy, times are too hard to buy new literature, and he would have no chance to read either books or periodicals if he had them. A younger set of Smart Alecks dominates the medical society, and the only reason he retains membership is because he has never been fired out for nonpayment of dues. Idle moments are spent in gossip. The Doctor talks about the new doctor, punctuating his remarks with little tales, relating to the laity how he cured diphtheria without "horse juice," and how, in general, his competitors are neither on a medical nor on a moral plane with himself. It is hard to say it, but Old Doctor Foggy has become a grouch as well as a guesser. He seldom calls for consultation, but, when he does, it is with the greatest difficulty that the man he calls can conform to the peculiar necessities of harmonizing professional courtesy with duty toward the patient.

Thank God, the guesser mentioned in the article above referred to is usually a kind-hearted and lovable man, and there are few who are grouches, also. But, there are some. However, that is because they have unknowingly lost sight of the true spirit of progress and incidentally become blind to the actuating principle of all things—eternal love.

Taking hold of the new is no disrespect to the old. Moses wrote the finest work on camp hygiene ever promulgated; for all that, if Deuteronomy were written today, it would mention and commend typhoid prophylaxis as practiced in modern armies.

On Modern Pharmacy and Proprietaries.—A visitor at the office not long ago glanced over the various bottles and other things in evidence and remarked: "Doctor! I do not see

why you have so many ready-made preparations about, since you are a pharmacist as well as physician."

The writer explained that it was quite possible that the fact of being a pharmacist made him more critical about the medicinal agents employed. We live in an age of machinery, and Messrs. Jones, Smith, Robinson & Co., Limited, can more quickly, cheaply, and accurately fix up one million nice soluble tablets ready for dispensing than could the writer a dozen crude ones. These gentlemen must either live up to their label statements, or take a long chance on what the negroes call the "jail-house"; not to mention possible loss of business from failure to do so. Incidentally, most physicians are too busy to do any needless work in connection with dispensing. This does not lessen the enjoyment of being able to work out the official assay for opium without the book, if one can, nor does it signify that an attempt would be made to perpetuate hydrofluoric acid in a glass bottle by a physician or pharmacist, but simply that it is better to take advantage of the modern means of production and distribution.

If all the world goes mad, including the United States, it will be time to skin off some bark and dig some roots, verify them, and, if all the available alcohol and prohibition-booze gives out, make infusions and give them hot (after all, not enough medicine is given in hot water). With all due respect to the hallowed memories of Thompson, Thomson, Beach, *et al.*, we live in a different period of evolutionary progress, a fact for which we are in part indebted to these same pioneers of *American* medicine.

Now as to the proprietaries. In the first place, with the exception of a very few definite chemical products made under patent protection of process or name, and having no precise equivalent obtainable, the writer uses none of this class of products; nevertheless, he believes that very many of them have their field of usefulness and that the reason why they have in many cases been such a success in a financial way is, because they have merit, and physicians, as a whole, have not devoted the amount of study to chemistry and pharmacy that they might have done. Many articles have been placed on the market with names composed of initial letters, vowels or syllables from their main ingredients, and some of them have done, and are doing, good work. They doubtless often have been used when the same drug or an active principle of it possibly would have been overlooked by most of us.

All questions have two sides, some more. To illustrate. Last spring, when the writer and his degreess but capable partner were walking in the woods, she called his attention to a beautiful little flower.

It was *sanguinaria canadensis*. The partner remarked upon its beauty and purity of coloring; whereupon the writer said: "Mohr's 'Plant Life of Alabama' mentions the Warrior River Valley as one of its southern limits. It is a poppy; same family as opium-plant. Wish I were a working galenical chemist. I believe that, although it is official and used by all three schools, it has further possibilities. Opium has more than a dozen isolated active principles and comes from the same family." Now just suppose the writer had become convinced that there was money in awakening interest in a somewhat neglected, although recognized, drug and gotten financial backing while he exploited that pretty flower commercially; had combined it with a little *pulsatilla* and called it "pulla-san," or added something else to embellish the name. What then?

The question now is, Would a service be performed by putting this thing on the market? How many patients would it aid? How many physicians would it cause to look up the ingredients as stated on the bottle and get busy with the U. S. P. stuff? The fact that the writer has such poorly developed commercial instincts, that it is a matter of congratulation when he collects enough and dodges enough bad investments to come out even at the end of the year, has nothing to do with the virtues of the red or the white potent juices of the *papaveracæ*. Again, is he justified in putting the preparation on the market, or would he be if possessed of a commercial instead of a botanic tendency?

The Journal of the American Medical Association comes to hand with a criticism of the English for substituting helicon for the German aspirin, correctly remarking that a prescription for acetylsalicylic acid fills the bill better than either name. Shall we blame commercial push for the fact that there was a market for this chemical under a trade-name? If I prescribe hexamethylenamine under a copyrighted name, who should meet the additional expense entailed upon the patient by my regrettable ignorance of pharmacy and chemistry? We are almost back to the country doctor exploiting the hypothetical "pulla-san."

It can hardly be denied by either the users of *sanguinaria*, or, better, its active principle *sanguinarine*, that under certain circum-

stances it is of the greatest service in respiratory troubles; and there is ample literature to corroborate this. That dry, atonic condition of the respiratory mucosa, with deficient secretion, "tickling" in the throat and the characteristic cough certainly calls for sanguinaria. There are numerous drugs which in small dosage are stimulating expectorants, but there is *only one* sanguinaria.

Pellagra and Peas.—Doctor Buck's remarks on pellagra, appearing in November CLINICAL MEDICINE, are really excellent. Also the comments by the editor. It is too soon to say with certainty that this disease is not caused by a contagion of some sort, and it is highly commendable to keep up the search for the "critters" which may be responsible, also for their intermediate hosts. However, the trend of investigation seems to be establishing strong evidence that pellagra is purely a trophic disorder, caused by lack of the "balanced ration," as the stock-men say.

Without advancing any specific theory as to the cause, other than the existence of cell starvation, with the resulting lessened resistance to all invading organisms, the writer follows, and advocates, a dietetic and symptomatic treatment. The usual sufferers from this disease are likely to be great eaters of corn bread and the classic "sowbelly," this ordinarily being used fried in its own grease, while limited as to quantity mainly by the resources of the family finance.

Going upon the idea of starvation through lack of quality instead of quantity, I recently insisted upon the only available article of diet anywhere approaching the protein ideal, namely—peas, just field-peas—principally in the form of porridge and reinforced with buttermilk when obtainable. This pea dish was continued as the main article of diet for quite a time; I never could find out just how long, as the patient yearned for her regular meals and became generous with herself before instructed to that effect. But, yet, after several months there has been no return of the trouble.

The medical treatment was addressed mainly to the alimentary tract. Papain was given early in the course, because of digestive insufficiency, and was continued for some time. Cholagoges of mild action were employed from time to time, chionanthoid seeming to be well indicated. A little arsenic was given, and calcium-creosote was not forgotten, while the sulphocarbolates came in for aid in keeping down intestinal infection and resultant toxemias. The symptom grouping was merely analyzed as nearly as possible, and what

seemed the indicated remedy applied to meet changing conditions.

Correct the diet, not forgetting that cell starvation may exist even where a plentiful food supply apparently is at hand and of needed variety, then prescribe the indicated medicinal agents. Remember that caution against spread always is indicated in any disease not absolutely known not to be caused by specific contagious or infectious organisms, and even then, that like causes produce like effects, which necessitates hygienic and sanitary precaution, to prevent other attacks in the same family or community. This, in the writer's belief, sums up the treatment in the present state of our knowledge.

The liberal fruit and vegetable diet is good, but do not forget the possibilities of peas. The writer thinks that his next pellagra patient will get a course of the bacillus bulgaricus. If all the Bulgarians are killed off in the present European unpleasantness, we still shall have a good thing, with an enlarging field of usefulness, in the Bulgarian bacillus.

A. L. NOURSE.

Sawyer ville, Ala.

"WHAT CAN THE DOCTOR DO FOR HIMSELF?"

In response to your request made in the December issue (first editorial) I will tell my own ideas as well as experience; and what I shall say applies to the mass of our physicians—the country doctors.

The greatest obstacle in the way of progress, professional, scientific, and financial, is the want of hearty co-operation. There is too much jealousy in the ranks of the profession. Many men are engaged in the practice of medicine who are morally as well as intellectually unfit. There are men among us who, I know, would rather see a patient die than call in a consultant. There are those who, for fear a consultation may be demanded, will rush a patient off to a hospital. There are a thousand and one petty jealousies and backbitings to which all of us have been subjected.

These things should not be; however, just as long as they continue there will be no harmony nor advancement in the practice of medicine in the rural districts of our country.

Let me illustrate my meaning. One time I attended a woman in confinement. My competitor, hearing of the case (he had previously at odd times attended the family) drove to the house a few days later, and in a

most unprofessional manner said to them that, rather than have the woman's life endangered by me, he would willingly have attended her without charge. Here is a young doctor who has settled in our community, whom time and again we have befriended, but who at the first opportunity endeavors to stab us in the back.

Something is decidedly rotten in the medical profession. Men of the caliber here characterized are unfit, utterly, and should never have been allowed to enter our ranks.

The medical profession of America is full of abortionists, of quacks, of drunkards, and all sorts and conditions of worthless men.

The question, then, grimly confronting us, is: What can the honest doctor do for himself?

Let me draw a pen-picture of the condition which should exist, and which, although I shall not live to see its realization, I sincerely hope the members of the coming generation of country practitioners will experience.

In every town where there are two, three or four physicians, these men should practice together; have a common office, but with separate consulting-rooms. They should amalgamate their capital, for the building, equipping and support of this institution. Each of them should specialize in certain directions, and then they should work as a unit in absolute harmony. Every community has a right to demand this harmony of its doctors; the doctors owe it. They should be ready for any emergency. Instead of rushing off a patient, when attacked by appendicitis, fifty or a hundred miles to a hospital, they should be competent and prepared to do the operation themselves.

Let us look at the results of such a combination. In the first place, these physicians must be gentlemen, in the fullest sense of the term. Any community would be justly proud of such an organization, and rightly so. The day is fast approaching when the medical profession perforce must unite, and not alone for the benefit of the community, but for their own protection. Such an arrangement would eliminate the quack, the patent-medicine vender, the abortionist. No dishonest doctor could withstand the opposition from an honest combination of physicians and an indignant public. Dishonesty would go to the wall. You would not hear Dr. A. speaking ill of Dr. B. Among the community the coterie would be known as "our physicians," and the man who would dare to reflect upon their honesty, integrity or ability, would receive a severe rebuke.

Now, doesn't this look nice — on paper? Well! it is possible, too. This combination would also solve the financial problem, because Mr. X. could not run up a bill with Dr. A., and belittle him in the eye of Dr. B., in order to get a few more visits for nothing. The surgical operation would be done at the patient's home, while, still better, the fee that otherwise would go to some distant surgeon could be divided among themselves. Also, the profits from the drugstore that would be conducted in combination with this organization would go into the pockets of the physicians—for honest drugs, instead of for patent medicines for which a gullible public is swindled out of large sums every year.

The moral uplift of a community wrought by honest men would be one of its greatest assets: sober men, ready and willing at all times to give the best they have, and to sacrifice, if need be, their very existence for the protection of the community against dishonesty and vice.

As the editor wishes to hear of personal experiences as to how success has been attained, I will "speak out in meeting"—not, indeed, that I have made any great success. What little success I may have attained has been accomplished in the face of a great deal of opposition and by hard work, by the installation of the best equipment I could afford, keeping strictly sober, and attending to business. Other factors were: collecting my bills so far as possible, letting the community know that I place a fair price upon my services, and always endeavoring to give to the best of my ability, value in return; never hesitating to call to my aid consultants, and choosing learned and honest confrères; always being anxious to learn from the man who knows more than myself—the man who knows it all is a dangerous commodity.

In addition, may I advise you to read good medical journals, pick out nuggets here and there and store them away—they always come into use. One particular idea gleaned from a medical journal has been worth many dollars to me. Read—and I say it again—read *CLINICAL MEDICINE*.

"DELAWARE."

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Conducted by GEORGE F. BUTLER, A. M., M. D.

When fields are withered and the frosty hills,
Wrapt in the New Year's mantle, o'er the vale
Rise purple in the distance, and the gale
Has left the woodland sighing by loved rills
And meadows, where the summer woodbird fills
The quiet air with melody, I steal
And see the snow-wreaths lying like a veil
Above the voiceless waters. Winter chills
The pallid brow of earth; the wild flowers droop;
The sparrows rest where late the delicate loves
Of Nature's fondlings, breaking into song,
Thrilled with strange joy; the pasture's ferny slope
Stays tenantless, and lorn Pan moans among
The sad and broken arches of the groves.

—
On a bright, crisp winter morning, a few days ago, I went over to the beautiful natural park directly across the street from my house in Attica. How exquisite and virginal the repose! It touched me like some perfection of music. Later in the day, when the influence still possessed me, I wrote the above sonnet. I felt as Alexander Smith must have felt when he wrote: "I would rather be remembered by a song than by a victory. I would rather build a fine sonnet than have built St. Paul's. I would rather be the discoverer of a new image than the discoverer of a new planet. Fine phrases I value more than bank notes. I have ear for no other harmony than the harmony of words."

I forgot for the time that I was a doctor. It might be well for all of us occasionally to forget our profession and think of other things than pathology. We doctors are continually standing on the confines of existence, welcoming the newcomer, bidding farewell to the goer-away. There is a tendency to allow science to crowd sentiment out of us. Charles Darwin, one of the greatest scientists of the last century, grieved in his later years that he had lost his appreciation for poetry and music and art. As a young man, he had enjoyed all of these, but for years he stretched his mind in other directions, and at the close of his career he had lost his appreciation for the high things of the spirit.

With the departure of the old year and the incoming of the new, we are prone to be

haunted by restless memories that stalk like sheeted specters from the tomb. As we look back across the years, we can see that not one year has been free from mistakes. But we should forget the unpleasant things, the blunders of the past, remembering that the great things are still to come. The past with its sunlight and its shadow lies behind us, and to it we cannot return. Our faces are in the other direction.

We should be prepared to do greater, better things this coming year. The question we should ask ourselves this month is not, "What have I attained?" but, "How far am I reaching?" Are we reaching for something beyond medical science? Are we broadening out? Shall we miss all the divine sweetness of life, in order to "succeed" in medicine? Shall we shed home, family, relatives, friends, the ordinary human affections, poetry, art, music, good books, in order to be known only as great surgeons, or great physicians?

With these thoughts, you will pardon me, I hope, if I do not write today of disease and the treatment of disease, but finish this effort by expressing some thoughts in verse that, I trust, will be as valuable to you as a dissertation on some mental or physical malady.

I

Come, sacred fires, snatched by Promethean hand,
And kindle deep and full the soul in me.
Touch into living verse, by thy command,
These burning thoughts that struggle to be free.
Awake the golden lyre in minstrelsy,
And, breathing in diviner harmonies,
Call from its sleep the voice that lurks in thee.
Oh, lift thy trembling accents to the skies,
Borne on these wintry winds which musically rise.

II

Hear me, ye everlasting stars, that keep
A jealous watch above the sleeping earth—
Ye tender skies, that mourn and even weep,
Like a fond mother o'er her children's birth.
Enkindle now on Poesy's sacred hearth
The fires that sleep within this mold of clay,
Touched into truer, nobler life, give forth
This morning hymn that with Aurora's ray
Greets all the holy glory of the coming day.

III

Come, spirit of the night-winds and the streams,
Impart to me their melody and fill
With purest thoughts of field-flowers in their
dreams

This earthly mind. If God, indeed, doth will
My feet shall share with them beneath the hill
Their holy pilgrimage—ye woodlands, bear
Aloft my song in fancies sweet and still.
Fold, fold me to thy breast, thou forest fair
And lift my soul within thy fragrant atmosphere.

IV

Ye fairy guardians of the brooklets, come,
And keep your loving watch beside the spring
That gushes from my heart, to find a home
In th' world's great ocean, guard this offering,
'Round whose refrain my deepest pulses cling,
And lead me where earth's sweetest violets
Their pure breath yield to welcome blue-eyed
spring,
Where my beloved, her feet, the charming, sets,
And the keen butterfly the loving roses frets.

V

Shine softly, breathe o'er the regretful past
A breath of beauty, and in pity lay
Your angel hands upon its sleep and cast
The mantle of your loveliness. So may
This wintry darkness yield at last to day,
As Nature strews her lichens, exquisite,
To cover o'er the face of old decay,
Till all that is most heavenly and sweet
Appears new-born—the buried seed is requisite.

VI

This be my constant prayer while struggling on
For life's exigencies, which never rest.
May each hour bring its bliss to look upon
This glorious world that God with light hath
blest
And with his holy thoughts has all imprest.
Like perfume may it stream below, above.
Oh, could I lay my head upon thy breast,
Pure fragrant earth, and near to Cupid's grove
Sing thy great song of faith, of beauty, and of love.

VII

We should not mourn. God lays on every breast
Some burden to be borne through earthly years.
Each deemeth his own heart the sorest pressed,
And none of all as bitter as his tears.
We should not let our sorrows and lone fears
Veil from our eyes the beautiful in earth;
For truth and Virtue reign, and Love oft cheers,
While hopeful Trust and a clear spirit worth
Glow with the fires of Love and Pity's gentle birth.

VIII

To lift the beggar's burden from his heart
And wake to life and joy his slumbering soul,
The fetters of the poor drug-slave to part
Till from his sorrow-stricken days shall roll
The shadow of temptation, to control
The passion-fires within us, and renew
Life's pristine purity—the snow-white soul
That clothes the immortal spirit whence it grew—
These shall make our journey beautiful and true.

IX

What are our tears, if through our pains we rise
To learn when sorrow is a diadem,
And that earth's poverty and cares and sighs
We may relieve; whom bigots may condemn,
And deem it sin to touch their garment's hem—
To save these from their patient suffering;
Or, if we help a single soul to stem
The tide of wo that want and penury bring—
What joy to heal the wounds left by oppression's
sting.

X

'Tis joy to feed the hungry; to restore
To warmth and gladness whom the chilling breath
Of winter tortures; to relieve the poor,
And drive from wasted homes the spectre Death;
To deem no act, however low, beneath
Our happier lot, but lift in tears of joy
The meanest earth-mate—these shall be a wreath
Of love and beauty time can ne'er destroy,
And render pure and sweet life's eloquent employ.

XI

Let not religion's dogmas stay our feet
From Truth's clear pathway, nor the heart's
behests—
That finite lead to what is infinite—
By the world's cant be stifled in our breasts,
What'er our lives with truth and love invests,
This fear not to pursue, though it shall be
To jeopard our deepest interests;
To sever the sweet hopes of Friendship's tie,
Or bring our earthly state from wealth to beggary.

XII

Seek virtue in pure deeds and charities
That claim the reverence of all mankind;
Let no base fear of men e'er close thine eyes
To Truth's sublimity, or Hatred bind
Thy tameless spirit, that with chains confined
Sickens and dies of grief—pure, bright, and free
The law of beauty in thy heart enshrined,
Which shall with sweetest virtues compass thee,
Revealing to thine eyes thy soul's divinity.

XIII

A law unto itself is a pure heart;
No monarch e'er shall dictate or restrain
Its course or from its radiant journey part
The freeborn spirit. Cowards hiss in vain
To clear its thought: their vengeance brings no
pain,
Their scorpion tongues it treads beneath its feet.
They pass away. Still Truth and Love remain,
To make that journey beautiful and sweet;
For, a pure heart is Love, and Love is infinite.

With this brief message I bring this article
to a close. During the present year I hope
to be able to make this department of greater
interest and value to the many friends whose
acquaintance I have been making from month
to month. Some of them I feel I know al-
ready. Others I hope to know—personally.
To one and all I wish a Happy New Year.

Among the Books

HARE: "DIAGNOSIS"

Diagnosis in the Office and at the Bed-side. By Hobart Amory Hare, M. D., B. Sc., Jefferson Medical College, Philadelphia. Seventh edition, thoroughly revised. With 164 engravings and 10 plates. Philadelphia: Lea & Febiger. 1914. Price \$4.00.

"In the diagnosis of a given disease," says the author, "it is essential that the physician rest his opinion, not upon one or two symptoms, but upon a series of symptoms which, when put together, give him a complete, or nearly a complete, picture of the malady. It is as futile for a physician to attempt to base a diagnosis upon a single symptom as for an architect to attempt to determine the appearance of a building by seeing one of the stones which has been removed from its walls."

This volume is devoted to a plan whereby a recognition of the symptoms will lead the physician to a diagnosis. The symptoms considered in diagnosis are first discussed, and their application to determine the character of the disease follows. In other words, the book is written upon the plan which is followed in actual practice, namely, the upbuilding of a diagnosis by grouping the symptoms. Laboratory diagnosis is omitted by the author, leaving this to special works on that subject, so that the intention of considering symptoms, as they appear in the office and at the bedside, may be the better carried out.

WORKS UPON RADIUM AND RADIOACTIVITY

The Philosophy of Radioactivity, or, Selective Involution. By Eugene Coleman Savidge, M. D. New York: The Wm. R. Jenkins Company. 1914. Price \$1.50.

Radium and Radiotherapy. By William S. Newcomet, M. D., Professor of Radiology, Temple University, Philadelphia. Philadelphia and New York: Lea & Febiger. 1914. Price \$2.25.

Radium Therapeutics. By N. S. Finzi, M. B., M. R. C. S., Chief Assistant X-Ray Department, St. Bartholomew's Hospital, London. New York: The Oxford University Press. 1913. Price \$2.00.

Practical Measurements in Radioactivity. By W. Makower, M. A., D. Sc., and H. Geiger, Ph. D., University of Manchester. New York: Longmans Green & Co. 1912. Price \$1.10.

These four books on the subject of radium and radioactivity as applied to medicine really are complementary to each other, and together they compass the entire range of the subject from beginning to end.

The first two of these books, it will be seen, are by Americans, and the last two by Englishmen. Doctor Savidge's book treats of radioactivity wholly from the standpoint of its philosophy and rationale—an aspect of the subject which all-too-many practitioners of the therapeutic mode ignore or neglect, and thereby come to grief in their application of it; for, it is a well known axiom of mathematics that you cannot get more out of an equation than you postulate, and one hardly can make an intelligent use of or interpret radioactivity, unless he thoroughly understands the rationale and mode of action and the limitations of the force with which he is dealing.

The second book in the list, that by Doctor Newcomet, is on a more practical and utilitarian plane, but still quite general in character, expounding the theory and practice of radiology in its broad relationship to therapeutics. Of the four, this one is, perhaps, the most complete and comprehensive from the point of view of the practitioner; and, if only one of the group is to be selected, this would best be the one of choice. However, it contains neither the purely scientific exegesis nor the strictly technical instruction needed for a really expert use of radium and its emanations.

The third, Doctor Finzi's work, is devoted exclusively to the therapeutic application of radiology, but it deals with therapeutic principles rather than with applied therapeutics. It may be regarded as an excellent introduction to the therapeutics of radium and radium emanations. It deals with means and methods of administration, physiological, and pathological action, and principles of treatment of internal and superficial diseases. It

is written with the customary English clarity and straightforwardness.

Makower and Geiger's book, the last of the group, is purely technical, dealing altogether with methods and instruments of measurement. Neither of the authors is a medical man; both are physicists. It represents the extreme opposite end of the subject to that presented by Doctor Savidge, yet, of equal importance to him who would intelligently and expertly avail himself of radiology in clinical practice.

Outside of their practical value, all four books are interesting as exemplifications of the progress that has been made in the last year or two in radium investigations. Doctor Savidge's subtitle is a very happy expression of the physiologic role played by the rays in living organisms—Selective Involution. There, we think, is the key to the entire philosophy and rationale of radiology as applied to medicine. It furnishes us with a means of inducing and directing the process of involution; and, whatever may be the detailed application of the mode to this and that pathological condition, the availability and efficacy of radium as a therapeutic measure rests, in the end, upon its power to influence cellular involution. A clear appreciation of this truth affords a clue to the understanding of all the information and instruction contained in these and other works on radium and its therapeutics.

HUBBARD: "PRACTICAL SURGERY"

Practical Surgery: Diagnostic, Therapeutic, and Operative. By B. Roswell Hubbard, M. D., Professor of Surgery in the California Medical College of Los Angeles. Second edition. With numerous illustrations. Los Angeles: Young & McAllister Inc. 1914. Price \$6.00.

In writing this book, it has been the avowed aim of the author to make it practical; and, in the pursuit of this aim, he has avoided long dissertations on surgical diseases and said little, if anything, concerning the treatment of morbid states. The surgical subjects receiving attention throughout the work are both general and special, and the treatment suggested is such as the author has found to be effective, both in hospital and in a private practice extending over a period of some thirty years.

The characteristic feature of the work is its surgical therapeutics. The author evidently is a firm believer in prescribing medicines in accordance with specific indications for them.

When suggesting remedial treatment, he specifically names the medicinal agents which he believes to be indicated and plainly states the symptoms or other reasons for giving these remedies. On the other hand, he does not, by any means, subordinate the frankly surgical phases of treatment to his enthusiasm for medicinal therapeutics. The two are balanced with sensible discrimination.

The book should be a valuable one for the practitioner, who is obliged to deal with his surgical cases both from the standpoint of a physician and also from that of a surgeon; and, as a matter of fact, every surgical case has to be considered from this dual, or borderland, viewpoint.

CROSSLEY-HOLLAND: "PHARMACY"

The Pharmacy Handbook. By F. W. Crossley-Holland, F. C. S., Member of the Pharmaceutical Society of Great Britain. New York: Oxford University Press. 1914. Price \$2.00.

The title of this book is likely to be misleading, for, in this country at least, pharmacy is understood to refer to the compounding and dispensing of drugs and other substances for use in medicine, and this subject is touched upon in only the most cursory manner in the work before us. It would better have been named "A Handbook of Medicinal Materials and Newer Methods of Treatment for Pharmacists." The value of the book to the medical profession is problematic, and we imagine that those pharmacists who have an interest in books like this one would desire a more thorough discussion of the various topics.

The plea in the introductory portion of the book for closer cooperation between physician and pharmacist will certainly find an echo in this country, but we differ with the author as to the way in which this may be brought about. A good-sized volume, all by itself, could be written on the subject of the relation of the one profession to the other. On the whole, we are inclined to think that the work will not meet any particularly enthusiastic demand, in this country at least.

KNOWLES: "DISEASES OF THE SKIN"

Diseases of the Skin. Including the Acute Eruptive Fevers. By Frank Crozer Knowles, M. D., Instructor in Dermatology, University of Pennsylvania. With 199 illustrations and 14 plates. Philadelphia: Lea & Febiger. 1914. Price \$4.00.

Dermatology, once a rather meagerly represented branch of medicine in current and permanent literature, has in the last few years forged rapidly to the front in both these fields. No one can any longer complain of a paucity of books on the subject. We have on our own shelves some dozen or more textbooks on diseases of the skin, and we do not pretend to any very complete library. And the notable thing about it is, that they are all excellent works, with very little to choose between them in the matter of merit.

Even yet, however, the subject is none too widely represented. It is one which bears a good deal of exposition, for it is altogether too little understood by the practitioner at large, and, withal, it is one of the branches of medicine in which the general practitioner is constantly called upon to be his own specialist.

Not being a dermatological expert himself, the reviewer, of course, is unable to undertake any expert criticism of Doctor Knowles's book; still, to his very ordinary judgment, it appears to be a good, sensible, practical aid to diagnosis and treatment. He is particularly favorably impressed with the illustrations, which, after all, play a large role in books on dermatology. It is really wonderful with what graphic realism these pictures, without any coloring, manage to visualize the various skin lesions, so that one's mental vision almost instinctively and infallibly supplies the element of color.

VISITING LISTS FOR 1915

At this season of the year, a selection of a visiting-list and account-book for 1915 must be considered by every physician. There are a number of good ones. For instance, we can recommend:

The Physician's Visiting List (Lindsay & Blakiston's), published by P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia. This excellent little book is entering the sixty-fourth year of its publication, and it seems to be as popular as ever. In addition to the usual pages for keeping the physician's accounts, it contains a dose table, information regarding the treatment of poisons, incompatibility, asphyxia and apnea, etc. The price ranges from \$1.25 to \$2.50, according to the number of patients per day or week, the cheaper book being for 25 patients, and the most expensive for 100.

The Practitioner's Visiting List for 1915, is published by Lea & Febiger, Philadelphia and New York. This also has long been used, and deserves all the popularity it has had.

In addition to affording a simple and complete list for keeping records of daily practice, it also has much reading matter which is of value to the physician, including beside the dose table, a chapter upon therapeutic reminders and one upon the examination of the urine, and poisons and antidotes. This visiting list is made in four styles, weekly, monthly, perpetual, and for 60 patients. The price is \$1.25 net.

Finally, we call attention to the Physician's Protective Accountant, published by The Abbott Alkaloidal Company. This book consists of 12 monthly visiting-lists and a leather-bound ledger. It is so arranged that the physician may have in his pocket, ready for immediate consultation, a complete statement of each patient's account. This book has been on the market for a number of years, and we can unreservedly commend it. The price is \$2.50 for the complete outfit; but the parts may be secured separately.

BISHOP: "ARTERIOSCLEROSIS"

Arteriosclerosis. A Consideration of the Prolongation of Life and Efficiency after Forty. By Louis Faugeres Bishop, A. M., M. D., Fordham University School of Medicine, New York. New York: Oxford University Press. 1914. Price \$3.50.

This is distinctively the age of preventive medicine. But it must be remarked that at the present time the conception of preventive medicine is rather one-sided. It has got no further than the idea of public prophylaxis. It concerns itself wholly with the prevention of those diseases which infest communities as a whole. It is, in fact, almost entirely a phase of sociology and economics, and scarcely at all of medicine. Such part as medicine plays in it is in the capacity of medical science and not of medical practice. And since infants and children are most affected by that class of disease which concerns the community; and middle-aged adults by that class which concerns the individual, it will be found that while infant mortality is being rapidly reduced in this and other civilized communities, the mortality of middle age is considerably increased. Without in the least belittling the value of the infant life, we are constrained to ask, is not the life of the mature adult, in the prime of his active usefulness and productiveness, at least equally valuable to himself and to the community?

Doctor Bishop's work, and the summary of it which this book presents, is his answer to

this question. As the net sum of all the invasions which decimate the ranks of infancy may be practically expressed in the term "infection," so may the sum of all the physical degeneracies which cut down the life and efficiency of the middle aged man be generically expressed in terms of arteriosclerosis. And an inquiry into the causes and prevention and treatment of arteriosclerosis is really an inquiry into the physical causes and prevention and treatment of premature old age and death. This is precisely what Doctor Bishop's book amounts to. It is a most valuable contribution to a most important branch of present day clinical and preventive medicine.

BRAUN: "LOCAL ANESTHESIA"

Local Anesthesia: Its Scientific Basis and Practical Use. By Prof. Dr. Heinrich Braun, Director of the Kgl. Hospital, Zwickau, Germany. Translated by Percy Shields, M. D., A. C. S. From the third revised German edition. Philadelphia: Lea & Febiger. 1914. Price \$4.25.

When the first edition of this book appeared, several years ago, the subject of local anesthesia was one in which the general surgeon was not particularly interested. Indeed, it was not until the discovery of adrenalin, in 1901, that the progress of local anesthesia became assured, for without its use a local anesthesia sufficient for surgical purposes was impossible. Of late years, however, the employment of local anesthetics in place of general ones has become exceedingly common, thanks to the introduction of various improved agents and the efficient technical work of men like the author of this treatise; and the time is ripe for an authoritative work on the subject, both from a scientific and a practical standpoint.

No one is better fitted to write such a book than Professor Braun. He is, indeed, justly called the father of local anesthesia, and to his untiring, intelligent work must be ascribed, in large part, the wonderful progress during the last twenty years in its science and technic.

English-speaking physicians are greatly indebted to Doctor Shields for furnishing us a translation of this edition. As he very pertinently says, "The profession must, and will, accept a method of local anesthesia which has no mortality, and will use it in many cases which are today being operated upon under general anesthesia." We may be pardoned for taking to ourselves some little

credit for furthering its adoption in this country.

CUTLER: "THE SICK-ROOM"

The Care of the Sick-Room. By Elbridge Gerry Cutler, M. D. Cambridge: The Harvard University Press. 1914.

A capital little manual, containing the gist of some public lectures delivered at various times by Professors Bradford, Ernst, and Cannon to the Harvard medical classes. It is precisely what its simple title implies—a homely, practical little preachment on the care of the sick-room, including the care of the patient's person. It is an exceedingly human little book, as well as being scientific. No intimate detail is overlooked in the art of making the patient comfortable and wholesome. Even the care of the hair gets its share of attention. "I well recall," we read, "the state of a patient's head in the early days of my practice, where no attention was given to the hair, for four days, during a severe fever. The days and days of hard work which had to be expended on that head will never be effaced from my memory." (We suspect that is from Bradford.) In most instances, the general practitioner has to be head-nurse, as well as medical attendant. He needs a little book just like this; and this is the one he needs.

HARRIS: "MOTHERHOOD"

Motherhood. By E. S. Harris, M. D., Independence, Mo. Published by the Author. 1914. Price 10 cents.

We have had many requests for just such a little book as this one—a little manual of instruction and advice, not too long or too technical, to put into the hands of the expectant mother for her guidance through the period before her in matters which pertain peculiarly to her own personal care and responsibilities. The author's object, as stated in his introduction, is to "so instruct maternity patients that they may be able to avoid so many indiscreet things, usually considered of little importance, but which are fruitful of so many evil results." There are only thirty pages in the book, and the price is but a dime, yet, it contains really all that a prospective or actual mother needs to know on the practical side of the subject. Our readers will find it an excellent little manual to recommend to their obstetrical patients.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6055.—“Persistent Uterine Bleeding.” H. S., Idaho, presents a case that troubles him and upon which he desires advice: This is what he writes:

“This is the case of a woman 33 years old who became pregnant over a year ago, miscarried, and a physician curetted her uterus. After the curetment, she began to flow continuously night and day. This kept up for several months, but stopped last August until about November, when the bleeding began again. Since that time from three to five towels have become soaked regularly in twenty-four hours. The woman is of good physique in every way, eats well and sleeps nicely. Aside from this continual flowing, she is well. There seems to be some pressure somewhere, for she reports that at times the flow will gush out as if there were pressure behind, and it is in clots. The odor at all times is awful. I have made examination of the uterus three weeks ago, and, so far as I can ascertain, things are normal. I tried packing the uterus, placing the packing as far back as I could, but this does not stop the flow. I have used every method I know of to control the hemorrhage, but with no success. Do you think pituitrin will be of any benefit, and would this gradually effect a permanent cure?”

In view of the very few data offered and imperfect knowledge of the woman's intra-uterine conditions, we regret being unable to express any positive opinion as to the cause of this persistent hemorrhage; nevertheless, we feel quite sure that a cure can be effected if a thorough exploration of the uterine cavity is instituted, and then the indicated operative procedure is carried out.

In the first place, doctor, you say that the woman became pregnant and miscarried. What caused the miscarriage? If the abortion was induced, it is possible the uterus was injured. If she had a chronic endometritis

(and this is one of the most frequent causes of abortion), the same condition may now be responsible for the hemorrhages. It must also be remembered that the physician who curetted may not have done the work thoroughly. Pieces of retained placenta may remain in the uterus (especially about the cornua) for months. DeLee removed fragments of placenta nine months, and Playfair, eleven months, after abortion.

Above all, it is imperative first to ascertain the real cause, for, while menorrhagia itself seldom is directly fatal, the constant loss of blood results in anemia, destroys the patient's health, and renders her liable to death from some trifling intercurrent disease. A thorough examination would, of course, reveal the presence of polypi, pathologic conditions of the endometrium, and so on. It is probable in this case that dilation, thorough curetment, and packing of the uterus will promptly prevent the hemorrhage.

It would be well, perhaps, to send a specimen of blood to our pathologist for examination. The fact that the blood is expelled in clots and has a foul odor leads us to believe that the placenta was not entirely removed. In this connection, doctor, we would suggest that you read the exhaustive and extremely informative chapter on abortion and premature labors, in DeLee's new work, “Principles and Practice of Obstetrics.”

However, we must not forget the possibility of an underlying hepatic, renal, cardiac or splenic disease. You do not state whether this woman was a primipara or multipara, nor do you give us any idea of her past history. The period at which she aborted should be definitely ascertained.

Under the circumstances, we do not think pituitrin or any other drug will prove of service. A definite cause for the hemorrhage exists, must be discovered, and removed if possible.

QUERY 6056.—“Chromium Sulphate and Methylene-blue in Sciatica.” M. L. A., Indiana, writes:

“What has been your experience with chromium sulphate in sciatica? Is it used extensively, and with what success? Also methylene-blue—how about this in sciatica? I am now using a solution of quinine and urea hydrochloride, 1 percent, hypodermically. Have you used it, and what do you think of it? I should appreciate anything you may suggest.”

Chromium sulphate has not been extensively used in sciatica; however, we are not really as yet thoroughly familiar with the action of this drug, and it is just possible that it might prove beneficial.

We must bear in mind that pain in the distribution of the sciatic nerve may arise from an actual nerve lesion or be a functional disturbance; that is, neuralgic. Should the condition be owing to a true neuritis, treatment must, of course, be of the most thorough character. Rheumatism (i. e., acidemia) is unquestionably the most frequent cause. Occasionally pressure from disease within the pelvis and of the muscular tissue through which the nerve passes is responsible.

You will find the salicylates, alternated with the iodides, most efficacious. Thorough elimination is, of course, essential. Counterirritation should be applied until the acute symptoms subside. General massage, the affected limb being omitted, is beneficial. To the affected area, methyl salicylate and guaiacol should be applied (guimethyl is equally efficacious), after the parts have been treated for a while with hot compresses wrung out of a saturated solution of epsom salt.

We believe you can secure better results from a few doses of blue mass and soda, or calomel and podophyllin, followed by rheumatic (Candler) and sodoxylin, with intestinal antiseptic and salithia (each morning on rising), and applications of guimethyl and epsom-salt compresses, than by any other available treatment.

If it becomes absolutely necessary to administer an anodyne, use H-M-C modified; never morphine alone. Do not let the patient know what he is receiving. The high frequency current (vacuum electrode) undeniably is useful. If you will give us a clearer idea of conditions you have to contend with, we may be able to make more definite therapeutic suggestions.

QUERY 6057.—“Uterine Fibroid.” F. E. J., Georgia, wants to be told “what one could

reasonably expect to do with a fibroid of the uterus, about the size of a small grapefruit, with the use of calx iodata and saline purging. If,” he continues, “alkaloidal treatment will accomplish anything, please give me complete instructions. I do not intend to resort to the knife if anything can be accomplished by means of medication.”

It is a fact that uterine fibroids frequently yield to full doses of calx iodata. Since, however, we have become familiar with the action of chromium sulphate, we have alternated these two drugs, giving the iodine preparation for from fifteen to thirty days in ascending doses; then, after two days of saline elimination, substituting chromium sulphate for a similar period. It must be remembered that a subperitoneal fibroid is not so likely to yield as an interstitial, or even a subutérine one.

Subperitoneal fibroids, as a rule, are multiple, though occasionally a single nodule is seen. These tumors begin as sessile growths, but, as they develop and push the perineum forward, their attachment becomes more and more constricted, eventually distinct pedicles being formed. Occasionally this pedicle becomes twisted and the fibroid may become adherent and derive a new blood supply from one of the neighboring organs.

The interstitial tumor is the variety which yields most readily to medication, unless calcification has occurred. This latter change is more often observed in the subperitoneal than in any other variety.

We are not sufficiently familiar with the conditions of your case to venture an opinion as to the advisability of delaying operation; but, if the tumor is causing any trouble, we should have it enucleated.

If you can give us clearer clinical data, we may be able to comment more intelligently.

QUERY 6058.—“Ingrown Toe-nail.” D. F. M., Wisconsin, writes that he is anticipating excising an ingrown toe-nail (of the big toe) and intends to use a local anesthetic. “Please state,” he writes, “the best kind to use. Also kindly let me know something about the technic. Do you cut under and over the nail? What kind of rubber band do you use to restrict circulation? Will one application of the anesthetic be sufficient to perform the operation? Do you of necessity sew the parts after the nail is excised?”

It is a difficult matter to remove an ingrown toe-nail painlessly without injecting an anesthetic into the tissues. Fairly satisfactory results may be secured by freezing

the matrix thoroughly with the ethyl-chloride spray, then seizing the nail with a stout forceps and removing with a pulling twist.

Cotting's operation consists in passing the knife at right angles to the plane of the toenail into the tissues and shaving off the whole of the soft parts, together with a narrow sliver of nail on that side of the last joint of the toe. The wound is left to granulate and a contracted scar is the result.

It is unnecessary to point out that the nail cannot "ingrow" in that locality again, for the simple reason that there is no tissue for it to grow into. The operation is radical and positively effective, but the patient will have a sore toe for some time afterward.

Another operation, the most simple one, is as follows: Anesthetize thoroughly by the usual method, especially at the root of the nail, then seize the nail in the center and twist it out, finally curetting away exuberant granulations. This operation is simple, traumatism is slight, and the resulting incapacity of very brief duration. A simple borated dressing is all that is required. A rubber band should be passed around the root of the toe tightly enough to shut off the circulation before injecting the anesthetic.

There is very little hemorrhage, and if the second operation described is done no stitches should be placed.

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 QUERY 6059.—"Rodent Ulcer of Face." O. B., California, writes as follows:

"Can you suggest an internal remedy and also an external application for rodent ulcer of face (left side) in a man 96 years of age. It is of some years' standing, the ulcer healing in one direction, but making slow progress in another. I am at present using a dilute solution of echafolta, and it seems to help, but if anything is better, I should like to try it. I have been a subscriber for your journal almost from its inception, and I cannot do without it."

We regret to advise you that very little impression can be made upon a rodent ulcer of several years' standing in a patient of such advanced age; but, besides, you do not state whether the ulcer presents the usual characteristics, as, for example, slight, if any, elevation of margin, continuous ulceration, almost entire absence of new growth; neither do you say anything about possible earlier cauterization having been performed.

Of course, it is not always possible to employ caustics; still, it is essential, wherever possible, to destroy or remove the epitheliomatous tissue. A surgeon would oper-

ate, while dermatologists, as a rule, favor the application of caustics. In the following we present an outline of our own method of treatment of rodent ulcer.

First curette the growth thoroughly. After the oozing has ceased, apply, on a piece of rubber plaster, the following paste: Arsenous acid, 1 dram; powdered acacia, 1 dram; cocaine hydrochloride, 2 grains; triturate well, then add just enough water to form a smooth, creamy paste. Leave this paste on the lesion for from eighteen to thirty-six hours. Morphine, hypodermically, may have to be given to control the intense pain. Upon removing the plaster, you will find a black mass surrounded by an inflamed area. Now apply hot poultices until this slough comes away, then dress as you would any clean wound. Nuclein, bovine or iodoform gauze will prove efficacious at this point. If the diseased tissue has not come away completely, a second application of the caustic may be necessary. You might also apply to the ulcer equal parts of thuja and echinacea. Another good application, after the slough has separated, is a mixture of equal parts of scarlet-red ointment and alicphen, spread on sterile gauze.

In addition, we should give the patient arsenic internally in the form either of the arsenates of iron, quinine, and strychnine, with nuclein, one tablet after each meal, or else 5 drops of liquor arsenii compositis in 6 ounces of water, at similar intervals.

If operation, as well as the use of the caustic paste, are out of the question, you may still give the internal remedies suggested above; also maintain free elimination.

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 QUERY 6060.—"What Caused the Collapse?" A. R. H., Oklahoma, who says that he has long been a silent member of the "family," feels that he is now able to turn to the alkaloids with confidence in the treatment of "any old case" that comes along and (results warranting) uses them almost exclusively now. "True," he remarks, "there are yet many things for me to learn about the 'definite remedies,' but, since getting a working-equipment, this has been my reliance at all times, although, naturally, I have used other remedies when not exactly sure of the active principle indicated. To say that I devour (figuratively!) my CLINICAL MEDICINE every time a new number arrives is not far from the truth, for sometimes I almost forget to eat, so interested do I get in the many good things it contains.

"Now I must tell you of a (to me) most interesting case of typhoid fever in which the alkaloids proved their worth. On August 5, I was called to a man 71 years of age, who had that day returned from a two-months' visiting-trip in several of the western states. He had been sick eleven days at the time he returned, and, after examining the man and reviewing his history, my diagnosis was, typhoid fever, although his temperature was only 100° F., and to the best of his knowledge had not been higher since becoming sick. There was a slight tympanitic condition of the abdomen and constipation. At the time I saw him first, he had the furred tongue, and, barring the low temperature, it was in all respects a typical case of typhoid fever.

"I put the patient at once on calomel (1-6 grain every hour, for six doses), laxative saline, and the combined sulphocarbolates, besides strychnine arsenate, 1-64 grain, every three hours. When I saw him next morning, my heart almost went to my boots, for—from some cause, to me as yet unknown—the man was almost in complete collapse: temperature, 97.6 degrees, and no radial pulse discernible. My first thought was, hemorrhage; which a thorough examination failed to reveal, however, either then or afterward. I at once administered glonoin and strychnine hypodermically, crowding them to the limit for the next three hours, when I had the extreme pleasure of seeing my patient rally and his temperature return to normal. I visited the patient three times each day until August 19, the family being very much concerned (as was the doctor), and I never again found his temperature higher than 100° F. in all that time. Frequently it would drop to 97.8 or lower for a few minutes, then under the effect of stimulants come back to normal or again rise to 100. I kept up the "cleanup, clean-out and keep-clean" campaign throughout, together with daily spongings with tepid water.

"He was fed principally on buttermilk prepared with the aid of the tablets. Of this, he was allowed one quart a day. I also gave him albumin-water in the intervals, and at times a swallow of eggnog was given. Every third day he would get a saline laxative in the early morning, and the strychnine was given as often as necessary, mostly three times daily.

"After August 20, there was no further trouble regarding the low temperature, and the patient made an uneventful recovery. Today he is fleshier than for years and feels fine, except that, as he sometimes says, one

of his legs 'doesn't work right.' I feel confident that my diagnosis was right, for the family told me several days later that a doctor in Kansas had made the same diagnosis the day previous to the man's return home.

"Now, will someone of the 'family,' or the editor tell me what caused that collapse?"

Frankly, doctor, we are inclined to think that in this particular case the diagnosis was somewhat of the "snap" variety. It is possible, of course, that the patient did have typhoid fever; the clinical picture, however, is far from being distinct. You do not make mention of positive Widal or diazo reactions. It certainly would have been worth while to have had the blood and urine examined.

The persistent low temperature is decidedly peculiar. Morning remissions seem to be entirely absent. It would be interesting to learn the pulse rate; for, as we know, the condition of the pulse really is more important than the range of temperature.

Doubtless you recall that typhoid fever very rarely is observed in individuals over the age of sixty. However, it would be in such cases that we would expect to find an atypical clinical picture. The obstinate constipation referred to and slight elevation of temperature may have resulted from fecal retention and the collapse have been caused by the cathartic action of the calomel. More than once collapse has followed the passage of a hard fecal mass over a congested rectal surface; but even the sudden recession of the intestinal distention consequent upon the presence of a large fecal accumulation has been followed by collapse.

You say that the patient, who is 72 years old, "had been sick eleven days," before you first saw him. Were there or had there been any rose-spots? If the Kansas physician diagnosed typhoid fever the day before the patient returned home, he must have been, we should say, in the stage of advance, and we should have expected a steplike gradation in temperature by the time you took charge (presumably the second week of the illness); fever should have assumed the continued type, with fairly well-marked morning remissions.

You do not mention enlargement of the spleen or tenderness in the right iliac fossa. Had the stools the typical typhoid odor? Was the pulse of low tension and dicrotic? You would feel infinitely more satisfied, doctor, had you confirmed your diagnosis by the examination of the urine and blood, including the specific tests.

The chief confirmatory evidence, in our opinion, lies in the involvement of "one of the patient's legs." Venous thrombosis, most often in the left lower limb, is peculiarly characteristic of typhoid fever; the femoral, long saphenous and popliteal veins becoming most frequently thrombosed; the symptoms being pain and edema of the affected part.

Periostitis, owing to the typhoid bacillus or to pyogenic germs, is not an uncommon sequel. The tibia is the bone most frequently attacked, the first symptom being pain; a small swelling may be palpable. In addition, we must not forget the possibility of typhoid spine. In its milder form, this is characterized merely by some pain, rigidity, exaggerated knee-jerk, and some restriction of motion of one leg.

While congratulating you upon the successful handling of this obscure case, yet, we cannot regard the diagnosis of typhoid fever as being established.

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 QUERY 6061.—"Vaccine for Sinusitis." A. E. M., Minnesota, asks advice on the vaccine treatment of purulent sphenoiditis.

We hardly need mention that in the condition named various ocular troubles frequently are encountered, notably photophobia, amblyopia, loss of accommodation. Inspection of the nasal fossa reveals pus in the superior meatus; posterior rhinoscopy may reveal pus in the nasopharynx and the anterior wall of the sphenoidal sinus.

If the pus is confined, the pain in that region is intense and of a throbbing character. Unless the pressure is relieved, the retained pus will break through the sinus at the point of least resistance, usually at the site of the ostium, but occasionally through the roof, causing fatal suppurative meningitis.

A specimen of such pus should be forwarded to some pathologist for examination, and an autogenous bacterin prepared from it. The sinus may be reached with a probe or catheter entering at the ostium, and a specimen of pus can be secured upon the point.

The best method of probing the sinus is by means of a flexible probe, bent to a slight curve, and passed into the nasal fossa with the convexity upward. The point of the probe must follow the roof of the nasal cavity, along the cribiform plate between the middle turbinate and the septum, until it strikes a resistance-plane, which is the anterior face of the sphenoidal sinus. The operator then reaches for the ostium by moving the probe in various directions until it enters a cavity, the depth of which may lead him to believe

that he has entered the cranial fossa; closer probing, though, will reveal the cavity to average about 1.5 cm. in depth. By means of posterior rhinoscopy, the probe may be seen in the ostium.

The treatment is surgical, of course, the procedure for which may be found in any modern work on the nose and throat; also, in Keen's "Surgery," volume iii.

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 QUERY 6062. — "Goiter. Vaginismus. 'Thrush.'" A. McL., Kansas, wants us to give him a course of treatment for simple goiter, or bronchocele, "something that will do the work in the majority of instances."

The Doctor also requests advice in the case of a woman whose vaginal sphincter contracts so forcibly in coitus as to render union impossible for a while. Several excellent doctors have tried vaginal dilatation, also other measures, but the trouble invariably returns. The woman has borne no children and claims to be past the climacteric.

Thirdly, what can be done in a typical case of thrush; the man has also a chronic catarrh. The roof of the mouth is covered with a thick whitish-gray coat that has to be mechanically removed daily. He suffers much discomfort and his throat and fauces feel extremely dry. The Doctor concludes by writing: "I am a great admirer of the active principles and the positive therapy you teach."

A "basal" treatment for simple goiter which proves effective in very many cases is, briefly, as follows: Internal medication: strychnine arsenate, gr. 1-128; ergotin, gr. 1-6; quinine ferrocyanide, gr. 1-32; such a dose every four hours. Irisoid, gr. 1-6; and phytolaccoid, gr. 1-3, half an hour before food; calx iodata, grs. 5, three times a day, preferably on an empty stomach. Externally: Lay upon the goiter, each night, compresses wrung out of a fairly strong solution of potassium iodide; iodine ointment may be used as alternant. If possible, once or twice a week attach the negative pole of the galvanic current to the compress for fifteen minutes, in order to secure cataphoresis.

Vaginismus, or, spasmodic contraction of the sphincter vaginae, frequently proves extremely rebellious to treatment, and sometimes a radical operative procedure alone proves effective. The intensity of the symptom varies. In some women, the slightest touch, even the introduction of a catheter, may cause the most severe and painful spastic contracture; in others, the phenomenon occurs only after somewhat prolonged

irritation. The contraction nearly always occurs at the vulvovaginal orifice or just within the vagina; occasionally the spasm involves even the levator ani and muscles of the thighs.

As a matter of course, there always is a cause for this phenomenon, and that must be discovered and removed in order to effect a cure. It is true that a large proportion of women suffering from vaginismus are neurotic or hysteric. It is this writer's opinion, however, that the nervous symptoms more often are the result of preexisting vaginismus, rather than the cause of it.

We find that the irritation proceeding from a torn hymen, a small ulcer, fissure or coitus will set up an obstinate vaginismus; or, also, the trouble may originate from a urethral caruncle, neuroma of the fossa, varicosity or prolapse of the mucous membranes, or fissure of the fourchette, vestibule or anus. In some instances, vulvitis, congestion of the cervix, prolapse of the ovaries or displacement of the uterus have proven to be the cause. In one instance, a dislocated coccyx lay at the bottom of the spasticity.

Occasionally, however, no local lesion or abnormality of any kind can be discovered, there being merely local hyperesthesia, general nervous excitability, and intense dread of coitus; these conditions becoming aggravated, may ultimately result in a most severe form of vaginismus.

Make a most careful examination of your patient and then furnish us as clear a clinical picture as possible. Remember that we can not always discover the local (causative) lesion, as it may have disappeared, leaving the parts in a permanently irritable condition.

Many times the hyperesthesia and contractions can be relieved by the application of a weak solution of cocaine, or similar local anesthetic. The fluid should be gently applied with a cotton mop and the parts then lubricated with an ointment containing some campho-menthol or a little (only) of belladonna ointment. The latter, of course, must be used with caution, especially if applied shortly prior to coitus.

Hot salt sitz-baths frequently act beneficially. Also, excellent results have followed the application of the galvanic, the sinusoidal or high-frequency current, with vacuum electrode. Rectal suppositories containing codeine and hyoscyamine are of some service. In addition, thymol iodide in cottonseed-oil solution may be applied to the vaginal mucosa once or twice a day. Forcible dilatation of the sphincter with a bivalve speculum is the last resort, this writer, though, preferring to stretch the orifice with his thumbs. Many times the occurrence of pregnancy puts an end to this annoying affliction.

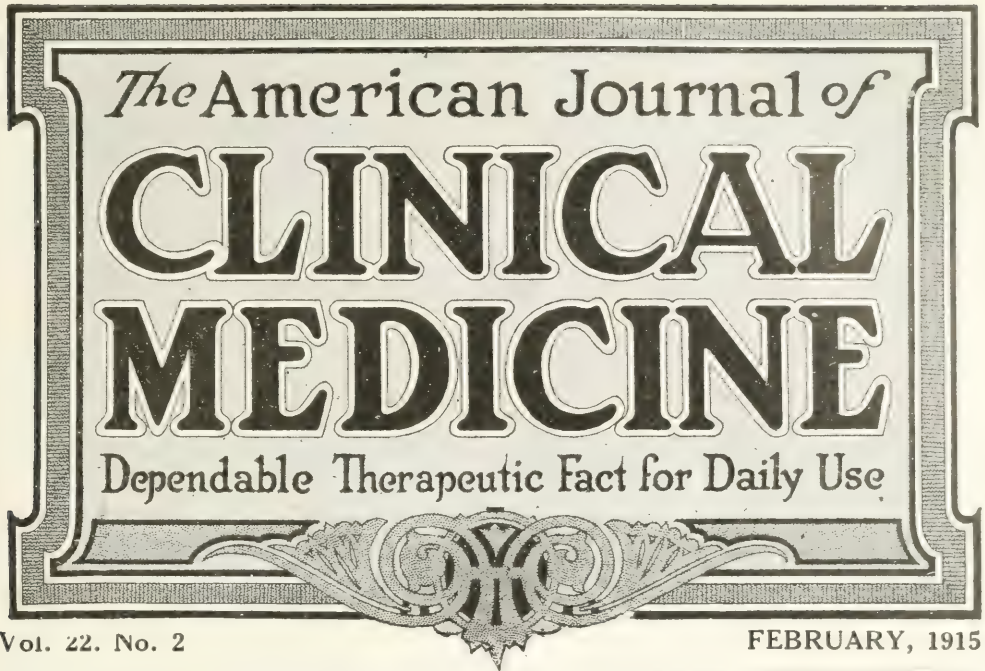
Thrush (stomatitis mycosa) is a disease of infancy; but your patient probably suffers from catarrhal stomatitis. This condition may prove rebellious, although it usually yields to thorough elimination and the maintenance of cleanliness of the mouth and intestines.

The patient's mouth must be cleaned out thoroughly several times a day. Give calomel, podophyllin (or irisoid), and bilein half-hourly for four to six doses, and a laxative saline the next morning; repeating this course every third night. Between times keep the bowels active with phenolphthalein or cascara compound; also give 10 grains of the combined sulphocarbolates (in solution) three or four times a day.

Wash and *swab* out the mouth with a solution of peroxide of hydrogen diluted with 2 parts of cinnamon-water, and then with fluid extract of echinacea mixed with 4 parts of water. A resorcinated preparation of calendula has, in the writer's hands, proven almost a specific. Another excellent mouth-wash is composed of boric acid, 10 grains; zinc sulphocarbolate, 5 to 10 grains; glycerin, 1 fluid ounce; water, 3 ounces. This should be used only after the mouth has been thoroughly cleaned with the peroxide of hydrogen solution and cinnamon-water.

Should the condition prove refractory, try galactenzyme tablets, crushed and allowed to dissolve in the patient's mouth; Bulgarian-bacillus bouillon is even better. Of course, the nasal catarrh must be attended to.





Plants, or Their Principles?

MEDICINE began with ignorance, and its daughter superstition. From the time when the sick applied to the temples of the gods for relief and received the assurance of the priests' intercession, plus a package of drugs, the conception of medical intervention has been based on this combination. Faith in the mysterious, incomprehensible powers of the man who stood between the people and their gods shared the public faith in the no-less uncomprehended agencies he utilized.

This faith in the mysterious, the unknown in drugs is to this day shared by laity and doctor alike. It is instinctive, in that it is rooted in the nature of man. That human imagination that peopled the forests, mountains, streams, clouds with supernatural existences will not be satisfied with dull prosaic known facts, but refuses to dispeople the vasts beyond the ken of the human mind.

Remember the charm you found in "Lavengro," that strange tale of gypsy Borrow? We hope you were spared the rude bump to earth received from the trivial, commonplace explanations of "The Romany Rye." When the early therapeutic materialists declared that the virtues of the famed Epsom water were merely those of its content of magnesium sulphate, there was an outcry of

protest with which the public and the profession sympathized—there was something in the waters above and beyond their principal mineral educt; and the benefits derived from drinking this healing outflow from nature's alembic were *not* mere saline laxation! Passionately men clung to the mysterious and refused to bound their faith by the trite Common Known.

So, when the galenist makes his appeal for the crude-plant preparations, as against the active principles on which their therapeutic efficacy depends, he does far more than put in a plea for the tinctures: he appeals to one of the most deeply rooted instincts of the human heart.

We want to believe in the realm beyond sense and reason; we must, and will, believe in it. "It must be so. Plato, thou reasonest well." And, so, we enthrone the noble Athenian as the exponent of the highest possibility of human thought, while Lucretius is unknown. Why? Read his discussion of immortality; note the merciless logic with which he demolished the hypotheses, the analogies, the baseless argumentations, and seeks to prove what every sane mind refuses to believe—small wonder that Lucretius is ignored.

Now, please, friends, don't put me down as a follower of Lucretius. I think his name should be bracketed with those of Pythagoras, Plato, Aristotle, Avicenna, Darwin, and Lecky; but, while admiring his lofty intellect and standing amazed at his insight at that early age, I am not in the slightest degree convinced by his arguments or won to his beliefs.

Objections raised against generalities are favorite arguments, because much may be said on both sides. Thus, for instance, is it just to base the use of alkaloids on indications furnished by uses of the whole plant? Yes—and no. When the whole plant has been used for a specific purpose with effects dependent directly upon the alkaloid, the latter will do the work more quickly, better, more surely. Instance: When opium is given to relieve pain and induce sleep, morphine will do this better. On the other hand, tell us, please, for what purpose you would prefer opium to morphine?

As to gelsemium, with its varying content and proportions of two antagonistic alkaloids, this priceless remedy was never lifted out of the obscurity of quasi-domestic practice until the separation of gelseminine made possible the demonstration of the real values inherent in this plant.

As to *nux vomica* and *ignatia*, I deny that *ignatia* ever filled an appreciable place in medical practice; or that one hundred American doctors outside of sectarians ever used it habitually in their practice. If I am wrong, I hail from Missouri! Will any doctor who has been prescribing *ignatia* as well as *nux vomica* and is prepared to make and defend his choice between them, please write and tell me?

"O, surely!" you will say, "*ignatia* is a better tonic, just as *you* say *nux vomica* is a better tonic than strychnine."

But do you really know this, or do you think you know it, or have you read or heard it? Come down to dots. I also am able to reason; so, give us some definite facts upon which to reason.

The matter goes deeper—very much deeper than whether we should prefer the drug tinctures or their alkaloids. It really means: Has the science of medicine progressed so far that we can apply drugs intelligently? This is possible only, as I have many times stated, with three prerequisites, namely:

We must recognize a deviation from health.

We must know what drug will obviate this deviation.

We must administer the selected drug until physiologic balance shall have been reestablished.

Without these, we must fall back upon the primary statement, that the selection of drugs rests upon the empiric basis of practical experience. That means, we give the medicine, and the patient gets well; but how it acts, what it does, why he gets well, of all this we are blissfully ignorant and content to remain so.

High hearts are never long without hearing some new call, some distant clarion, even in their dreams; and soon they are observed to break up the camp of ease, and start on some fresh march. And, looking higher still, we find those who never wait till their moral work accumulates, and who reward resolution with no rest; who do the good only to see the better, and see the better only to achieve it.—James Martineau.

THE HARRISON ANTINARCOTIC BILL WHICH TAKES EFFECT MARCH 1: A DIGEST AND EXPLANATION

As we stated in these pages last month, the Harrison Antinarcotic Bill (H. R. 6282) was finally passed by Congress, and received the approval of President Wilson upon December 17, 1914. As provided, this bill will go into effect on March 1, 1915. In order that readers of *CLINICAL MEDICINE* may be thoroughly familiar with the provisions of the Act and know exactly what they must do (and what they cannot do) to comply with it, we submit herewith a brief digest and explanation. The information presented is based to some extent upon regulations now being drafted by the officials of the Treasury Department. It should be understood, however, that these regulations have not been definitely determined upon and are subject to revision. Should there be any changes affecting the accuracy of this explanation, they will be presented to our readers next month.

Who Are Affected by the Law.—"Every person who produces, imports, manufactures, compounds, deals in, dispenses, sells, distributes or gives away opium or coca leaves or any compound, manufacture, salt, derivative, or preparation thereof." This includes every physician, dentist, veterinarian and pharmacist, all of whom are specifically mentioned in the law.

With What Narcotic Drugs Is This Law Concerned.—As stated above, this law affects the traffic in opium or coca leaves and "any compound, manufacture, salt, derivative or preparation thereof." However, there are

certain exemptions. Thus, decocainized coca leaves are exempt from the operation of the law; also (see Section 6), it is provided that "This Act shall not be construed to apply to the sale, distribution, giving away, dispensing, or possession of preparations and remedies which do not contain more than two grains of opium, or more than one-fourth of a grain of morphine, or more than one-eighth of a grain of heroin, or more than one grain of codeine, or any salt or derivative of any of them in one fluid ounce, or, if a solid or semisolid preparation, in one avoirdupois ounce; or to liniments, ointments, or other preparations which are prepared for external use only, except liniments, ointments, and other preparations which contain cocaine or any of its salts or alpha or beta eucaine or any of their salts or any synthetic substitute for them: *Provided*, That such remedies and preparations are sold, distributed, given away, dispensed, or possessed as medicines and not for the purpose of evading the intentions and provisions of this Act."

The effect of this exemption is to permit the sale by unregistered dealers of many so-called "patent" and "proprietary" medicines containing small quantities of opium and its derivatives. It also exempts at least one official preparation, i. e., camphorated tincture of opium (i. e., paregoric). This clause is of course a concession to the proprietary and retail drug interests. So far as we can discover, every tablet, pill, and granule, and most of the liquid preparations containing opium or its alkaloids, fall under the operations of the law, and every physician dispensing or prescribing them will be compelled to take out a license.

The License and How It Is Secured.—Every physician, dentist, veterinarian and pharmacist, whether he dispenses or prescribes, must take out a license from the National Government, for which he will pay \$1.00. This license must be secured from the Collector of Internal Revenue in the district in which the applicant lives or does business. To secure this license, the applicant must fill out and submit to the Collector an application blank which said Collector will supply. In this blank the physician must state his name, location, and the character of his business or profession.

When the license is issued, the applicant will be given a registry number. It is expected that this number will be a permanent one, and that when the license is reissued, from year to year, the same number will go with it. Thus, John Jones, M. D., once

registered as No. 456, will remain No. 456 throughout his life. He will be permanently identified with this registry number.

First Payment for License.—Inasmuch as the fiscal year of the Internal Revenue Bureau begins on July 1, it is presumed that the first payment for license will cover the period from March 1 to July 1. This would make the first expense for license approximately 34 cents; in that event, the license would have to be renewed upon July 1.

Order Blanks, and Routine to Be Followed in Ordering Drugs.—The law provides "That it shall be unlawful for any person to sell, barter, exchange, or give away any of the aforesaid drugs except in pursuance of a written order of the person to whom such article is sold, bartered, exchanged, or given, on a form to be issued in blank for that purpose by the Commissioner of Internal Revenue. Every person who shall accept any such order, and in pursuance thereof shall sell, barter, exchange, or give away any of the aforesaid drugs, shall preserve such order for a period of two years in such a way as to be readily accessible to inspection by any officer, agent, or employe of the Treasury Department duly authorized for that purpose, and the State, Territorial, District Municipal, and insular officials named in section five of this Act. Every person who shall give an order as herein provided to any other person for any of the aforesaid drugs shall, at or before the time of giving such order, make or cause to be made a duplicate thereof on a form to be issued in blank for that purpose by the Commissioner of Internal Revenue, and in case of the acceptance of such order, shall preserve such duplicate for said period of two years in such a way as to be readily accessible to inspection by the officers, agents, employees, and officials hereinbefore mentioned." (Section 2.)

This means that every physician, dentist, veterinarian, pharmacist, or other dealer ordering from any person whatsoever, any of the narcotic drugs mentioned in this Act, must use in ordering them an official order blank, to be furnished by the Commissioner of Internal Revenue. These blanks will be furnished to the applicant by the local Collector of Internal Revenue. In order to secure them the doctor must make out a requisition blank which this official will supply.

The order blanks themselves must be purchased by the applicant (physician, dentist, veterinarian or pharmacist) and they will

cost \$1.00 a hundred. They will be made in duplicate, the price being for the 100 originals, duplicate being on the same sheet, probably as a "stub." The law requires that *the buyer* must keep the duplicate blank on file in his office subject to official inspection for a term of two years; while *the seller* must keep the original blank on file subject to inspection for a similar period. It is expected that these order blanks will be stamped with the registry number of the purchaser.

How Does This Act Affect the Dispensing of Narcotic Drugs.—The law specifically provides that "nothing in this Act shall apply (a) to the dispensing and distribution of any of the aforesaid drugs to a patient by a physician, dentist or veterinary surgeon registered under this Act in the course of his professional practice only." There is, however, one restriction, as follows: "The physician, dentist or veterinary surgeon must keep a record of all such drugs dispensed or distributed, showing the amount dispensed or distributed, the date, and the name and address of the patient to whom such drugs are dispensed or distributed," *provided* he does not "personally attend" the patient for whom the drugs dispensed or distributed are designed. These records must be kept, subject to inspection, for a period of two years. There is no restriction on the possession and administration of narcotic drugs by the patient's nurse under the physician's direction.

This means that if a patient is actually under the personal care of the physician or veterinarian, the practitioner is not required to keep a record of the narcotic drugs used. On the other hand, if the patient is not under his direct personal care, that is, if the drugs are sent to this patient by mail or messenger after written, telephonic or telegraphic request, without prior actual personal attendance on the part of the physician, then such records must be kept; in other words, every physician doing a mail-order business, or trying to treat patients without actually seeing them, will be required to keep the full records required of all other dealers.

How the Bill Affects the Prescribing of Narcotic Drugs.—It is expected that each physician prescribing any of the drugs mentioned in this Act will be required to sign his name in full to the prescription, and also to write thereon his registry number and office location. It is also expected that the pharmacist will be required to use reasonable pre-

cautions to verify the identity of the persons named on the prescription, and to prevent the drugs specified falling into the hands of improper persons. Such prescriptions must be kept (it is expected) in a separate file, for a period of two years. Except on prescriptions written by registered physicians, dentists and veterinary surgeons, the pharmacist is not allowed to dispense any narcotics whatever, except those specifically exempted by the Act. (See paragraph: "*With What Narcotic Drugs is this Law Concerned?*")

Inventories of Narcotic Drugs.—It is presumed that the Government will require of every manufacturer, dealer and dispenser of these drugs, an inventory of the quantities of narcotics on hand at the time this law goes into operation. However, just what will be required in this connection, we are yet unable to state. We have understood that these inventories must be made by March 5; but full information will doubtless be given by the Government later. Physicians can make no mistake in putting in their stocks at once.

Penalties.—The penalties provided for the violation of this Act are very high. It is provided "That any person who violates or fails to comply with any of the requirements of this Act shall, on conviction, be fined not more than \$2,000, or be imprisoned not more than five years, or both, in the discretion of the court."

This digest does not attempt to cover the Act in full, but only so much of it as may be of special importance to physicians at the present time. The requirements relative to importers, manufacturers and dealers are extremely rigid.

It will be apparent from the preceding that it will be impossible, or at least dangerous, for any physician, dentist or veterinarian to dispense or prescribe any of the narcotic drugs mentioned in this law after March 1, unless he has obtained a license and secured his registry number and order blanks. We therefore advise every physician to file with his local Collector of Internal Revenue, without delay, his application for license and his request for blanks. When convenient, such applications may be made personally, but if not convenient, they may be made by mail.

We shall endeavor to print elsewhere in this number of CLINICAL MEDICINE a list of the Collectors of Internal Revenue for the convenience of our readers.

If there are any questions regarding this law which our readers desire answered, we

hope that they will feel free to submit them to us.

By persisting in a habit of self-denial, we shall increase the inward powers of the mind, and shall produce that cheerfulness and greatness of spirit which will fit us for all good purposes; and shall not have lost pleasure, but changed it; the soul being then filled with its own intrinsic pleasures.—Henry More.

THE BUSINESS QUESTION AGAIN

I am still exercising my mind about the economic, or, if you prefer it, the business side of the doctor's work, wondering how he may improve his financial condition. As I have said before, I cannot do much in the way of offering any practical suggestion. For that, I must look to the men who are in the field, who have grappled hand to hand with the economic problem. And suggestions from the readers do not seem to come in very rapidly. It seems hard to break through the crust of convention and tradition and to get physicians to discuss this phase of their work with frankness. However, we print several good letters in this issue, and have others on hand.

I want to repeat what I said last month, that not only is it a perfectly legitimate and dignified side of the doctor's practice, but also an exceedingly vital one, this matter of "realizing" himself, of enhancing his value to his clientele, and then of cashing in this increased value.

I am not now speaking of the added value that comes of greater knowledge and higher skill. That belongs to the scientific side of his work. What I do mean is, the ability and the opportunity to market more extensively and profitably the knowledge and skill that he already possesses, at the same time that he is improving himself in these directions. I am convinced—I say it once more—that the general practitioner is not reaping, as he should, the economic harvest of his modern efficiency and advantages; and I want to know why he isn't and how he can be helped to do it.

Let no one be shocked at the use of that word "market." I know it isn't considered quite the thing in polite society to hint that the doctor has to do with any such vulgar thing as "marketing." The doctor does not sell wares; he renders services. And he does not ask people even to engage his services—he waits until they come to him. All of which may be very correct as a proposition in the theory of ethics; indeed, a large part of it holds good even as a matter of actual

applied ethics. However, it is equally true, dear reader (I am speaking now, not in meeting, but eye to eye, face to face, man to man), that, in the last analysis, the doctor sells his services just as the merchant does his goods, and the patient buys them just as he buys the merchant's goods.

Now, carrying the analogy a little farther, every physician knows that, unless he does something else besides laying in stock in trade, in the shape of knowledge and equipment, and then just sitting down to wait for someone to come and buy, he is likely to sit for a long time, with ample leisure to contemplate the goods on the shelves. It matters not how able and well prepared a man may be, if he does not find some way of making connection between the demand for his services and the supply which he stands ready to furnish, his assets might as well be liabilities, indeed, they do become liabilities, for his very training unfits him for other kinds of work.

I do not mean to say, of course, that a physician should go out onto the street, collar the first prosperous-looking man he meets and say: "Get sick, you villain, and send for me, or I'll be the death of you." Neither would I suggest that he is to make a nice attractive display of his qualifications and armamentarium in some public place, for the possible seduction of susceptible patients, as the merchant is permitted to do with his wares in order to bait the passersby.

Nevertheless, as sure as you live, if the physician is to live at all, he is bound to exercise some sort of psychology as between himself and those whom he hopes to serve in their sickness, if he expects to realize upon his mental and professional capital. The fact that he is debarred from making any direct display or appeal renders the problem that much the more subtle and difficult; but it does not eliminate the problem *in esse*. It is not even limited to the economic—that is, the business—phase of the doctor's work, this psychological necessity. Without it, he cannot even develop to the full his usefulness to the public. Yet, should he ever be so fortunately situated as not to need payment for his services, and should not intend to demand compensation, the possession and exercise of this psychological faculty of "making connection" still would be required to enable him to give away his services.

However, I am talking of the economic aspect of the problem—and talking quite frankly and unreservedly. Furthermore, I

am trying to make it clear to the doctor that this business element of practice, far from being a matter to be ashamed of or touchy about, is the vital thing that effects the contact between your work and its object. No physician need feel ashamed to desire success, yes, financial success. No doctor need blush for having attained success. Not only is the laborer worthy of his hire—that is but one side of it—but the highly-paid laborer is worth more to the world than the low-paid. Let us, brothers, without derogating one whit the dignity and loftiness of our work, put away false delicacy, and frankly talk out together, ways and means of making doctors—yes, of making *ourselves*—more prosperous, and therefore more useful, men.

It is in *this* time we are to live, and no other. Let us humbly, tremblingly, manfully look at it, and we shall not wish that the sun could go back its ten degrees, or that we could go back with it. If easy times are departed, it is that difficult times may make us more earnest; that they may teach us not to depend on ourselves.—F. D. Maurice.

CALCIUM SALTS IN PNEUMONIA

When one knows he is right, he does not need the weight of authority to back his convictions. Nevertheless, there is a certain satisfaction in having one's judgment, no matter how clearly established it may be, endorsed by such authority; and especially so when the endorsement not only applies to the bare conclusion, but to all the detailed reasoning and experience through which the conclusion was reached. Such is our feeling upon finding that no less an authority than Sir James Barr, in his presidential address delivered before the Southern Glasgow Medical Society, made a categorical affirmation of all that we have for so long asserted concerning the value of calcium in combination with iodine in the treatment of pneumonia and other respiratory disorders.

Doctor Barr very pertinently points out that the crucial dangers in all inflammatory diseases of the lungs and the respiratory organs—in all fevers, for that matter, but especially in those in which the right heart is directly embarrassed—are, first, the destruction of leukocytes and, next, the tendency of the blood to antemortem clotting. And then he further points out that the protection against these contingencies is in direct proportion to the available supply of calcium in the system. These principles find clinical expression in the axiom that the more cal-

cium salts and leukocytes the sputum contains, the more favorable is the prognosis.

Nor does the beneficent role of the calcium salts stop here. As every physician knows, from the time that he knows anything at all about the physiology of the circulation, calcium salts are the principal agent in maintaining cardiac contraction and muscular tone—an important enough state of affairs under any circumstance, but of paramount necessity in pneumonia, where the capacity of the heart is the crux of the situation. Unquestionably, one of the factors in the impairment of cardiac capacity which so frequently attends this and other febrile diseases, and which brings about such a disastrous denouement, is the rapid loss of calcium from the blood that always takes place in these diseases.

The keynote to the successful treatment of pneumonia is, that we should not wait for emergencies to overtake us and to depend upon combating them when they occur, but that we should, from the outset, anticipate and forestall them. Particularly is this true regarding the heart. Here, there is no place whatever for expectant therapy. We *know*, beyond all question, that sooner or later in this disease the heart will be subjected to a tremendous strain, one that well might overwhelm the most adequate organ. And it is our routine duty to prepare the heart for this crisis, not by whipping it into making drafts upon its reserve, but by furnishing the muscle with a reserve upon which to draw when the time does come.

Digitalis is one of our most efficient standbys in this anticipatory treatment—which, be it observed, is far different from expectant treatment. In digitalis, we have an agent which both tones and rests the cardiac muscle, conserving its strength for the critical moment.

However, according to the rational therapeutic principle that has just received endorsement from Sir James Barr, the administration of calcium salts during this anticipatory period is of equal importance with that of digitalis. For, to feed the patient calcium, is to furnish him with the very physiologic reserve from which his heart-muscle draws its contractile power.

Says Sir James: "I have had good results from calcium salts with iodine." But that dictum, to the readers of CLINICAL MEDICINE, spells calx iodata.

Here, then, is a field of usefulness for calx iodata not generally appreciated or exploited, yet, theoretically rational and clin-

ically verified. The season of pneumonia is upon us now. Not but that, like death, this enemy has all seasons for its own; but in the late months of winter, or the early months of spring, whichever we may choose to call them, pneumonia is more prevalent than any other time of the year. Therefore, it is timely to bear in mind the advantage of giving your pneumonia patient such a remedy from the very beginning of the attack.

WHY THE ALKALOIDS?

To the very numerous class to whom the active principles are simply one indifferent form out of a number of the corresponding drug, I have a suggestion; it is taken from the report upon emetine, made public by Professor Rogers, of Calcutta—a very good authority, and one not to be charged with any commercial interest in the drug.

Altogether, 30 cases of amebic dysentery were treated with ipecac, and 25 with emetine, the latter administered hypodermatically. These are the data:

IPECAC CASES

- 4 died within 3 days
- 7 died after 3 days
- 2 discharged in very bad condition
- 4 discharged uncured
- 13 discharged cured

EMETINE CASES

- 2 died within 3 days
- 2 died of other diseases
- 21 were cured

Those dying within three days were virtually beyond help when admitted to the hospital.

The average stay of the ipecac-patients in hospital was 16.4 days; of the emetine-patients 7.2 days.

The average number of days before the stools finally became normal was, under ipecac, 11.4 days; under emetine, 2.35 days.

The average doses of ipecac were 406 grains; of emetine, 2 grains—equivalent to 180 grains of ipecac.

Drop the mysticism, the superstition that sees in a drug something beyond its active principles, the rather silly quibbling as to whether the latter represent the remedial values of the plant or are educts or products, and the similar nonessential objections with which conservatism endeavors to stem the advance of knowledge; and come down to hard fact. There you have it. We can do with emetine what we can not do with ipecacuanha; and we can do with quinine, morphine, cocaine, atropine, strychnine, pilo-

carpine, and eserine, what we can not do with cinchona, opium, belladonna, nux vomica, jaborandi, and calabar bean.

What is true of these eight well-known, well-established pharmacopeial alkaloids, is true of the entire range of alkaloids and other active principles throughout the plant-world.

Quit dreaming! Wake up! Give your imagination a rest and your power of observation and your reason a chance.

I am glad to think

I am not bound to make the world go right,
But only to discover and to do,
With cheerful heart, the work that God appoints.

I will trust in Him

That He can hold His own; and I will take
His will, above the work He sendeth me,
To be my chiefest good.

—Jean Ingelow.

LINT FOR WOUND COVERING IN WAR TIME

Many among us well remember the days when absorbent cotton was a thing still hidden in the womb of futurity, and many a pourd of lint—charpie we called it, by its French name—the writer of these lines has “pulled” for his father, who was one of those old-fashioned country doctors just as Doctor Lydston so faithfully depicts that race of extinguished benefactors in his (seemingly forgotten) “Over the Hookah;” and it seemed mother and the farmers’ wives never could turn up enough of wornout linen and cotton garments or even bed-sheets to meet the demands.

Those are bygone days, living only in the memories of a dying generation, and defatted cotton-fiber became king. Pulled lint lapsed into nirvanic desuetude, and even “us of the olden times” could think of it only with a pitying smile, wondering “how ever” this old world could have got along with such a crude stuff. Yes, and we children sat around the table, maybe on the floor in a corner, and plucked and plucked with hands first washed, in a child’s fashion—perhaps, perhaps not; and the bunched threads were deposited on the table or in our laps, and finally, all thrown together into some paste-board box or such.

Those were the good old times when the Secesh seceshed; when Lister had not yet thought out listerine or accused invisible bugs of all the mischief in this sad old world; when laudable pus still was a thing for the doctor to be proud of; when, in fact, he was not a British Lord, but himself was picking

lint for some poor chap that "the enemy" had endeavored to convert into a perambulating sieve

Now, however, comes a war—War, capital W—and there is not enough double-cleansed defatted cotton around to comfort all those misguided men who think it glorious to set themselves up as targets for dumdums and cannon-balls. Of necessity, the use of lint has been revived: the demand by field-surgeons in France, Germany, Britain, Austria, Russia for material with which to dress the soldiers' wounds is enormous. Of course, greater care is generally being exercised than in preantiseptic days, in clean handling and sterilizing of the lint; yet, under pressure, and especially among an ignorant, backward population, these requirements often are not met. So, with accustomed thoroughness, a German military surgeon has made an investigation.

In the *Militärarzt* (1914, No. 17), Doctor Hochenegg reports, briefly, these findings: The lint was drawn from pieces of (boiled and ironed) old linen and percale, no precautions whatever being taken by the workers. The product was disclosed to be relatively germ-free, and throughout harbored none but benign saprophytes; but subsequent routine sterilizing destroyed these, as well as any pathogenic microorganisms, occasionally adhering.

In practice, this lint proved to be very elastic, pliable, and markedly absorptive as to the various wound secretions, thus constituting an excellent substitute for absorbent cotton as a covering for wounds. Adhesion of the fibers is obviated by placing the lint between gauze. It must be understood, of course, that each batch of lint should be drawn from the same kind, or very similar textile, not mixing different yarns.

It is a sad weakness in us, after all, that the thought of a man's death hallows him anew to us—as if life were not sacred, too, as if it were a comparatively light thing to fail in love and reverence to the brother who has to climb the whole toilsome steep with us, and all our tears and tenderness were due to the one who is spared half the hard journey.—George Eliot.

TO END WARS

Dr. Charles F. Taylor, editor of *The Medical World* has issued a proposal designed to put an end to wars between civilized countries. He suggests that the President send invitations to a conference, to be held in Geneva after the close of the present war, of delegates from all countries possessing settled

governments. Before this conference is to be placed a plan for an International Government, under whose control are to be put all matters pertaining to war—the armies and munitions of war, among others. The latter are to be employed thereafter solely for maintaining domestic peace and to repulse any foreign aggression that may be attempted by parties outside the international comity.

It is unnecessary to dilate upon the benefits that might follow the adoption of such a scheme. The world not only would be relieved of war and its frightful results, but of the crushing financial burdens of armaments. The men and money thus released could be directed into the channels of commerce and internal development. Truly, the millennium would dawn.

And there is just the difficulty—the plan is based on the willingness of men to be fair and just, which they are not; on the assumption that the human race is civilized, which it isn't.

That such a condition may arise some time and be made practicable, is our hope—and that hope constitutes our optimistic expression of belief in the possibility of human improvement and the existence of a beneficent Providence. Meanwhile, we are rather proud that it is a doctor, and a medical editor, who is first to propose such a plan and put it in intelligible words. More power to you, Taylor; may your shadow never grow less.

The plain truth is, that Europe is so far behind us in moral development that she can not yet comprehend the loftiness of our motives in dealing with Cuba and Mexico as we have. Perhaps there may be a bit of hysteria in our action; but, after all, we have given the world an example of rare generosity and forbearance, an example badly needed. We have seen some of the richest sections of this earth fairly begging us to take them and make of them what nature has made possible, to utilize the riches with which she has so prodigally endowed them to restore peace and protect honest industry there; and we have resolutely held aloof and told them they must learn to help themselves.

Part of our moral elevation we take as evidence of superior probity. Part may be posing; but not much. But part we may as well acknowledge is due to our own sense of unexampled richness—we have so much land already that the possession of more does not hold out to us the lure it does to close-packed Europe. But—how long is this to continue? Already we, who feel so

powerfully the hunger for land, begin to find it grow scarce. We have no more homestead territory, except that which requires development by engineering-works and other capitalistic enterprises. We have to drain swamps, irrigate arid tracts, adapt vegetable crops to varying and hitherto useless regions. With the exhaustion of wild lands, we must rebuild the fertility and increase the productiveness of that already subdued by the plow. We must go back and pick up the unconsidered millions of fairly good acres skipt in our race to grasp the more fertile tracts.

Decades may be thus spent before we reach the crowded state of Belgium, Germany or France. But how about the immigrant? With the close of the present war we shall see an irruption of multitudes fleeing to our shores, the like of which the world has never witnessed. The swarms that descended upon the Roman empire will be dwarfed by the coming outpour. Confidence in the maintenance of peace and the opportunity to work undisturbed will be gone from Europe; and every bereaved family will turn longing eyes to the land of promise, the one place on earth where war is not domesticated, where there is quiet at home and force to fend off foreign aggression.

Why should any Belgian remain in that country, when our own broad acres are open to him? Why should the citizen of any other small neutral nation stay there to suffer the fate meted out to Belgium? Why should any man in the warlike countries who is interested in any work or pursuit remain to be dragged from his life-work, to shoot down other men with whom he has no quarrel? The mother whose little sons are growing up to follow their father and brothers to unnamed graves; the workers whose industries are stopt and the fruits of a lifetime of labor swept away, their homes in ruins, their dear ones stricken by the fiery blast of war—the scholar who is snatched from books and laboratory and placed under some illiterate savage to learn the art of murder—why should any of these remain in that blood-saturated land?

Get ready for the coming human deluge. Open the vacant lands; study the races of the old world and be ready to direct each to his best habitat. Send the cotton-growing Armenian to the South, the fruit-loving Italian to the Gulf Coast, the wheat-growing Russ to the northwest, the French vintner to the Pacific shores, the Dane to the dairies of Wisconsin. Send all of them to the huge,

undeveloped fat fields of the lower Mississippi Valley, where there is the richest land in the world, crying for cultivators. There is a science still capable of development, still unnamed, that of fitting the immigrating multitudes to their most congenial locations.

Make yourselves nests of pleasant thoughts. None of us know what fairy palaces we might build of beautiful thought—proof against all adversity. Bright fancies, satisfied memories, noble histories, faithful sayings, treasure-houses of precious and restful thoughts, which care cannot disturb, nor pain make gloomy, nor poverty take away from us—houses not built with hands, for our souls to live in.—John Ruskin.

COERCION A POOR POLICY

That was an excellent address which Dr. J. H. Beal delivered before the St. Louis College of Pharmacy, not long ago, in which he dealt with the subject of coercion, both in religion and in medicine, pointing out the danger of that medieval idea that superior knowledge in any direction gives the right to impose one's peculiar theories upon everybody else and to say to those who may be less informed than he: "You shall not have that which you want, but only what is good for you; and we are the people who know what is good for you." It was a timely warning, well and wisely uttered, and the address deserves the widest dissemination.

As a general proposition, coercion is poor policy, in all matters of interest that admit of being viewed from more than one standpoint. It is inherently, basically unsound, because no amount of force or coercion ever settled a question, one way or the other. No question ever is settled until it is settled right; and the right is not arrived at while one party to the question is galling under the other's yoke. Practically, it is an exceedingly foolish policy, because, just as no question can be settled doctrinally in that manner, so also no situation arising out of the question ever is really controlled by it.

The exercise of coercion is in itself an admission that there is a desire on the part of the coerced, while held in leash for the moment, yet, wholly unconquered, to do the very thing that is the subject of coercion, and that the instant the leash is slipped, the desire will leap into still more violent activity.

Furthermore, no man or body of men ever exercised coercion without themselves suffering from the recoil. The brain may coerce the various members of the body to undue or unnatural activity; but the brain

suffers from the general overstrain. The interests of mankind, and especially of those who are concerned in the same general lines of activity, are so interwoven, so interdependent that none can expect to further his own cause by imposing injustice upon that of another, or by coercing another into a course which the one coerced resents or disapproves.

We have more than once preached these truths in these pages, in their application to the contentions which divide the various ranks of organized and unorganized medicine, and those which divide medicine and its allied interests, and we believe they cannot be reiterated with too much insistency. Every one of these interests has its own peculiar side of the various questions at issue, and each one demands fair dealing and consideration from the others.

As the peculiar champion of the interests of the physician, we have at times advocated the adoption of certain decisive policies and demonstrations, where we thought his interests were not receiving just consideration at the hands of medical organization. But such demonstrations are both useless and undesirable unless they be displays of reason and justice. And in the promotion of fairness and equity we always have been, and shall continue to be, just as prompt to champion the rights of organized medicine as those of the independent men in the profession.

The only effective way to persuade a man is to make him change his mind. Occasionally it is necessary, in order to do this, to make a more or less imposing and impressive display of force. But, unless it be the force of right and reasonableness, it would better have been left undisplayed. Demonstrations which merely have the effect of endowing a questionable position with the power of might only serve to make the position so much the more questionable. Only those demonstrations which invest right and justice with the might of solidarity and cooperation, thus adding to their genuine persuasiveness, have any effect in bringing about a real settlement of any large problem.

We repeat what we have said many times before, namely, that the fundamental interests of every branch and aspect of the profession are identical. There are questions of policy and conduct upon which there are bound to be differences of opinion. Nothing is to be gained in the solution of such questions and the harmonizing of such differences by selfish courses of action on either side, which disregard other men's rights,

nor by any attempt at forcible coercion on the part of either.

All of the difficulties between the contending interests are susceptible of solution by calm, friendly discussion and by a reasonable policy of give and take. And this is the *only* way to a satisfactory, permanent solution.

May I reach
That purest heaven, be to other souls
The cup of strength in some great agony,
Enkindle generous ardor, feed pure love,
Be the sweet presence of a good diffused,
And in diffusion ever more intense!
So shall I join the choir invisible
Whose music is the gladness of the world.
—George Eliot.

STUDY AMERICAN DRUGS

Quite a number of medical journals have taken up the cry for attention to be given to our native drug-plants. *The Therapeutic Digest* has a strong editorial plea for our plants in its November number. The following recommendations of American drug-plants are made:

Cimicifuga, for nerve and for muscle pain.

Aconite, for early fever, especially mucous.

Veratrum viride, for sthenic fevers. (Just how we are to secure the green hellebore, when the Pharmacopeia permits the druggist to substitute the cheap European white hellebore, is not stated.)

American hemp, for the cannabis indica, as a urinary sedative and an antispasmodic.

Piscidia erythrina, for sedating coughs, spasm, neuralgia, and febrile pains.

Lupulin, for insomnia, priapism, chordee, and to increase appetite.

Valerian, as a nervine, acting on the spinal centers; for nervous depression, chorea, spasm, hysteria.

Ustilago, instead of ergot, in uterine inertia.

Pituitrin, for uterine inertia.

Xanthoxylum, for nervous atony; as a capillary stimulant and in catarrhal gastritis.

Stramonium, instead of belladonna, for acute maniacal delirium.

Apocynum, instead of digitalis.

Lycopus, instead of digitalis.

Cratægus, for heart weaknesses.

Lobelia, as an antispasmodic.

Sanguinaria, as a respiratory tonic.

Asclepias, as a remedy in respiratory maladies.

Echinacea, for diabetic gangrene and for centipede wounds.

Solanum, for pertussis.

Conium, for mental nervousness and so on, following overwork.

Rhus toxicodendron, for migraines.

Cypripedium, for chorea.

Hyoscyamus, for paralysis agitans.

Staphisagria, for spermatorrhea.

Hydrangea, for vesical tenesmus.

Gelsemium, for pruritus vulvæ.

One may ask, what is there in these suggestions? Very little beyond an indication for experimental trials. When one speaks of using a remedy "for its action on the nervous centers," we ask, On what centers? And what action—stimulant or sedative?

Crudity characterizes the earliest stages of the science, but the time has come when we can demand something more definite. This lore of the earlier day has its value, but needs to be corrected and judged by the brighter light of the present. It would be equally wrong to throw it away in disdain, and to depend on it blindly, as the sectarian does on his outworn creed.

It has been the fashion for regular writers who condescend to notice native American drugs to find the recommendations of Eclectics "wholly unworthy of serious consideration," and exhibiting naught but "phenomenal incapacity and monumental ignorance." That sounds good and commends the critic as very, very regular and altogether lofty.

The trouble is, that it is dishonest, untrue, and wholly childish. These men possess eyes and ears, and somewhat of gray matter in their heads; they are able to see and hear, and to reason on their observations. They have made study in the sick-room their specialty, and their success with patients has not led to their exclusion from practice among the better classes.

I am putting forth no plea for the Eclectics—they are able to fight their own battles. I am putting up a plea for ourselves and our patients. If these men have any good remedies, we want them; if their observations have any merit, we claim the right to utilize them.

We want our fellows to try whatever suggestions the Eclectics make, that seem plausible. Are we not capable of judging? Can we not trust ourselves to win now the grain out of the chaff? Take exactly the position toward them that Jenner did when he found the English milkmaids had discovered the protective power of vaccination; and laid the foundation for modern serotherapy.

What is there a reasonable man can deny or assert positively now? We have just

finished reading Burton's "Arabian Nights," and in the whole wonderful mass of oriental imaginings found nothing nearly so crazy as what we now accept as true concerning radiotherapy, wireless telegraphy, color photography, and so on.

Do not accept a solitary assertion of the Eclectics as true; but try some of them out. Take the control they claim for polymnia uvedalia over enlargements of the spleen—that is easy for our brethren in the malarial belt—try it.

PNEUMONIA—SYSTEMIC OR LOCAL?

Until very recent times the respiratory origin of simple acute lobar pneumonia never seems to have been seriously called in question. It was universally agreed that the pneumococcus, which is a constant inhabitant of the mouth, became virulent under certain conditions, made its way into the respiratory passages and there set up a specific inflammatory process. This was the first effect of the bacteriological interpretations of the disease—to establish the conception of pneumonia as a local infection, as opposed to the older theory of pneumonia as being a general disease, with a secondary pulmonary localization.

Of late, however, we have witnessed the tendency of the modern doctrine of infection to return to the ancient conception of "lung-fever," changed in detail, to be sure, to correspond with our present-day knowledge of etiology, but identical as to the main process. In short, we are being taught that pneumonia is the outcome of a pneumococcus septicemia, of which, as Weill declares, "the pulmonary localization is but a secondary incident, often tardy, often obscure."

To quote another prominent authority, Joltrain: "Sometimes the symptoms of the septicemia predominate, sometimes they are so slight as to escape our superficial observation, in which case it is a matter of latent septicemia."

Dr. Roger Voisin, chief of the medical pediatric clinic of Paris, in a lengthy and powerful article appearing in the *Paris Médicale*, combats this septicemia-theory of pneumonia, taking his position principally upon the pneumonia of children, where the septicemia-doctrine is supposed to have its strongest exemplification. One by one he takes up the arguments of the advocates of the theory, from the clinical, pathological, bacteriological, and radiological standpoints, respectively, and critically analyzes them.

Thus Voisin points out that the alleged absence of physical signs in many cases of pneumonia cannot be regarded as evidence of the absence of pulmonary lesion; that frequently the seeming lack of such signs is due to a superficial and incomplete examination; that the functional symptoms, especially the sharply defined pain, certainly indicate changes in the lung; and, lastly, that Weill himself admits that from the very beginning of pneumonia in children there invariably is an inequality of expansion in the two sides of the chest.

As to the arguments derived from the pathologic anatomy, Voisin sees nothing in the anatomic localization of the lesion inconsistent with the respiratory origin of the disease. The fact that the disease focalizes in one or the other lobe of the lung, while the intervening portions of the respiratory tract escape, is simply owing to a weakened resistance in the part attacked and a healthy resistant condition of the parts that escape. He further points out that the localization of all the inflammatory lesions is determined largely by the nerve supply as also the fact, adduced by the septicemia-advocates, that the pneumonic consolidation following the vascular supply results from the nerve distribution being the same as the vascular.

From the bacteriological standpoint, which furnishes the advocates of the septicemia theory with their strongest argument, Voisin considers that doctrine particularly weak. He calls attention to the fact that there is a vast difference between the *presence* of germs in the blood and their *multiplication* there, and he points out that the latter condition has never been demonstrated in simple lobar pneumonia. In fact, he declares that bacillemia is far from being the rule in pneumonia and asserts that there is less reason to suppose that the microbes pass from the blood into the lung than that they pass from the lung into the blood; he affirms that the preponderance of evidence points to their presence in the blood being an accidental affair.

The arguments from the radiographic side are too lengthy to be gone into here. Suffice it to say that, by the showing of the radiographers themselves, Doctor Voisin shows that the lung opacity in pneumonia often precedes the appearance of the slightest symptoms of general septicemia, which effectually disposes of the radiographic argument.

All of which is sufficiently interesting in itself, sheerly as a discussion of the true nature and the processes of pneumonia; and important, too, in that it has a very definite bearing upon the prophylaxis and the treatment of the disease. These views restore the validity of those precautions against pneumonia which common sense has, for years, proclaimed, but which our rather extreme bacteriology has almost caused us to repudiate; and it both justifies and demands a therapeutic course far other than the nugatory nihilism and masterly inactivity to which so many of the profession have been in imminent danger of yielding.

However, this matter has, I think, a much further-reaching significance even than that. It speaks expressively of the limitations of bacteriology in the interpretation of disease, in general. With a full appreciation of the incalculable contributions which bacteriology has made to the understanding of disease, as also the invaluable help it has rendered in the prevention and treatment of disease, we now learn that, after all, the intelligent interpretation of disease-processes depends upon an intelligent clinical observation of the patient.

Assuredly, the laboratory and the microscope are invaluable agencies for the detection of hidden causes and the determination of biologic processes, but they do not, after all is said, change clinical facts. In so far as they *explain* clinical facts, the microscope and the test tube command our full confidence; but, when they undertake to *controvert* clinical facts and invite us to make clinical facts tally with them, then the laboratory aids are liable to be misleading. We should, at least, be slow to abandon well-established clinical findings at the sheer behest of the laboratory; we have a right to demand that it either disprove those findings, or else explain them as they stand.

From a therapeutic standpoint, Voisin's conclusions lend added weight to the methods which we have advocated for many years in this journal. It brings us back again to the necessity of relieving the pulmonary congestion and of seeking to induce normal vascular equilibrium, so much disturbed by the localized inflammatory process in the lung. This method was rational when it was first proposed by Burggraeve; and it is rational today. Of greatest importance—it cures.



Leading Articles

Blood-Changes in Dementia Præcox

And Artificial Leukocytosis in Its Treatment

By HALVAR LUNDVALL, M. D., Lund, Sweden

EDITORIAL NOTE.—We owe this paper to the kindness of Dr. Bayard Holmes, of Chicago, to whom it was sent with a view to its publication in America. This paper should be read in association with the one by Doctor Holmes, which follows.

MANY tracks have been beaten by those endeavoring to make out the nature of dementia præcox. I am not entering upon everything written on the importance of heredity. The vast amount of industry and intellectual power spent upon this matter can scarcely be said to have contributed to a better understanding of the disease in question. Nor can it be said that Freud's theories about this disease have been of any considerable service to us.

The histologic examination of the brain has given no results worth noticing; at least, the changes mentioned are not constant and may well be secondary.

The experiments with cultivation of bacteria from the blood and other fluids of the body of patients suffering from dementia præcox, and the experiments of agglutination of the same made by Bruce, may also prove to be a failure when critically examined.

Clinical science, which has enabled us to distinguish different forms within the large group of diseases styled dementia præcox, has also called our attention to the obvious relation that this disease has to the genital glands. The trials with the Abderhalden reaction which Fauser, Wegener, and others have already made also point to the supposition that a dysfunction of the genital glands is a fairly constant symptom in dementia præcox.

However, if one has spoken of a relationship subsisting between dementia præcox and the genital glands, as proven both by clinical investigation and the Abderhalden reaction, it would, for all that, be a hasty inference to think that this dysfunction of the genital glands is the cause of the disordered mentality.

Still less is one likely to feel tempted, by virtue of these experiments, to enter upon some kind of specific therapy against dementia præcox.

Another way, still, has been tried, in order to get at the nature of this disease. I am thinking of the morphologic examination of the blood. Investigations of this kind have been published ever since the middle of the preceding century. Considerations of space prevent my giving a somewhat close account of all these investigations. I shall content myself with pointing out that what strikes one most strongly, perhaps, when examining their results is the discrepancies encountered, not alone between different authors, but even between different cases of the same author. Even if these poor results may in part be accounted for by the somewhat unreliable methods of blood examinations resorted to by many investigators as also by the long-prevailing uncertainty of the psychiatric diagnoses, I am of opinion that the chief reason lies in another direction.

Variability of Blood Composition—Striking New Observations

The fact is, that all these authors, almost without exception, obtained their results by making but one single test of the blood of their patients, and then thought they thus had obtained an adequate picture of its composition. But this is a fallacy. As a matter of fact, in the few instances in which the blood of the same patient has been examined on more than one occasion, and during different mental states, distinct changes in the blood-picture have been evidenced. A few examples may illustrate this fact.

In five cases of manic depressive insanity, Fisher has shown that there is an increase in the cellular element of the blood during the maniacal stage. The increase in the white blood-corpuscles is represented chiefly by a polynucleosis. I myself have examined, during a considerable period, the composition of the blood in two cases of the same disease, and I made the same observation. Klippel has pointed out the same relationship in a case of transitory delirium (*delire transitoire*), in which he had examined the blood twice—in the excited and in the quiescent period.

In "acute mania," Bruce has found, at the beginning of the seizure, a decrease in the number of the leukocytes. Later there appears a leukocytosis, chiefly as a polynucleosis. If the latter is pronounced, it is a good prognostic. As to katatony, Bruce tries to prove that the disease begins acutely with fever and a polynucleosis, which later passes into a mononucleosis. If health ensues, a temporary eosinophilia will be found. These

Mononucleosis is a sign of the deficient reaction of the organism against a toxi-infection of long standing.

Eosinophilia is a "critical" sign.

In 1907, I found that in dementia præcox there occurred, under ordinary circumstances, no decrease in the red nor an increase in the white blood-corpuscles, but I demonstrated periodical "blood-crises" appearing in the form of anemia and an increase in the white corpuscles. These states might appear days or weeks before the agitated periods, but otherwise they coincided with them. I took the cause to be a toxemia.

Kuhn, Purdum and Wells, and Heilemann find a decrease of the polynuclear and an increase of the mononuclear and eosinophile leukocytes.

Some of the Results Tabulated

Leaving aside my results of the year 1907, it is held that the blood of patients suffering from dementia præcox exhibits: a decrease

TABLE I

		RED CORPUSCLES	WHITE CORPUSCLES	NEUTROPHILE LEUKOCYTES PERCENT	EOSINOPHILE LEUKOCYTES PERCENT
Males.....	Quiet.....	6,820,000 to 4,480,000	10,550 to 5,200	67.8 to 42.1	2.6 to 0.1
	Agitated.....	5,220,000 to 3,450,000	17,300 to 7,800	79.1 to 58.6	10.3 to 1.6
Females.....	Quiet.....	6,100,000 to 4,000,000	10,500 to 5,600	61.2 to 40.9	4.1 to 0.1
	Agitated.....	4,960,000 to 2,600,000	19,300 to 8,900	77.7 to 58.4	11.2 to 0.9

interesting investigations were not carried out, however, with the minuteness necessary for scientific blood examinations. Later English authors, however, confirm this increase in the leukocytes. Whether and to what extent this is due exclusively to disturbances in the concentration of the blood (these are not at all rare with the insane), it is impossible to decide. And Bruce and his successors have rendered the possibility of control in this respect impossible by not stating at the same time the number of the red corpuscles present.

Rougean finds in lunatics oligocythemia and an increase in the polynuclear leukocytes, and from this he infers that the psychoses rest upon a toxi-infectious basis. (Such a conclusion as regards the mental diseases seems altogether too bold, though!)

Dide finds anemia, which should be a sign of intoxication or infection. A rise of the red blood-corpuscles depends on a molecular condensation of the blood. It is found, therefore, together with a rise of the leukocytes, during states of excitement, when the excretions are increased.

in the number of red corpuscles, an increase in the number of white corpuscles, with a decreased percentage of the neutrophile elements, and an increased percentage of the lymphocytar, mononuclear, and eosinophile elements. I am going to show that this view is onesided and misleading.

Apart from the serial examinations which I shall present further on, I have also made single blood examinations in the case of a number of patients and in this way, in 150 cases of dementia præcox, I found the following values:

I arrived at these figures by taking 2 specimens from a patient at the same time, then took the mean proportional of the numbers for the two specimens. It goes without saying that I avoided the leukocytosis of digestion.

In Table II, I have put together the results of blood calculations on 14 other patients. The different specimens were taken at intervals of a week. The results were the same. These figures show, however, that the composition of the blood of the same patient is different during different phases of the disease.

In order to gain a still clearer view of the changes developing during different mental states, I have examined the blood of 15 other patients daily, or every other day, over a long period of time, up to more than three months. I arrived at the following results:

The Phenomenon of Blood-Crises

During the periods when the patients are free from phenomena of psychical irritation, one finds, as a rule, no changes other than leukopenia with a relative mononucleo-

tions during the course of the day, it also exhibits profound recessions, often going down to normal values. Frequently one can distinguish an initial and a terminal leukocytosis. The latter occasionally remains for some time after the number of red corpuscles has again gone back to the values they showed before the crisis.

The leukocytosis is chiefly a polynucleosis. This increase often is preceded by a considerable but rapidly passing decrease in the polynuclear cells.

TABLE II

CASE		QUIET	QUIET	AGITATED	AGITATED	AGITATED	QUIET	QUIET
1.	Red corpuscles		5,530,000	4,855,000				
	White corpuscles		10,600	15,000				
2.	Red corpuscles		5,605,000	4,755,000				
	White corpuscles		10,300	12,950				
3.	Red corpuscles		5,280,000	4,875,000	4,565,000			
	White corpuscles		6,300	8,200	13,500			
4.	Red corpuscles		6,200,000	5,300,000				
	White corpuscles		8,000	12,000				
5.	Red corpuscles		5,860,000	5,140,000				
	White corpuscles		9,000	16,500				
6.	Red corpuscles					3,125,000	4,270,000	
	White corpuscles					17,300	8,100	
7.	Red corpuscles					4,755,000	5,095,000	
	White corpuscles					12,200	7,800	
8.	Red corpuscles				4,710,000	4,725,000	4,960,000	
	White corpuscles				12,500	11,600	7,500	
9.	Red corpuscles					3,650,000	3,980,000	4,750,000
	White corpuscles					11,000	17,000	8,000
10.	Red corpuscles					4,270,000	5,050,000	
	White corpuscles					8,800	10,100	
11.	Red corpuscles				4,060,000	5,340,000	5,540,000	
	White corpuscles				15,100	16,300	12,300	
12.	Red corpuscles	5,250,000	4,900,000	4,650,000				
	White corpuscles	6,700	11,200	10,500				
13.	Red corpuscles			3,960,000	3,940,000	4,250,000	4,500,000	
	White corpuscles			13,200	10,300	16,500	8,000	
14.	Red corpuscles		4,230,000	4,150,000	4,350,000		5,150,000	
	White corpuscles		13,000	11,000	16,000		7,000	

sis, decrease of the neutrophile and the eosinophile leukocytes, and a seeming polycythemia. The polycythemia certainly depends upon vasomotoric disturbances, and changes of concentration connected therewith, in the peripheral vessels.

In the case of patients presenting periodical states of excitement, on the other hand, one finds quite typical changes recurring at intervals and to these I have given the name "blood-crises." These occur in every degree, from hardly perceptible changes to the most radical alterations, and consist in a decrease of the number of red corpuscles and in an increase of the white ones.

The leukocytosis does not occur as a smooth wave. Besides the physiological oscilla-

The eosinophile leukocytes show, at the beginning of the crisis, a further reduction from their already low values, and then they rise, sometimes considerably. The eosinophilia often remains for a long time after the blood-crisis.

The "mast-cells" usually appear in a somewhat increased number at the time of the critical, but especially of the post-critical, eosinophilia.

During the blood-crises, the vasomotoric disturbances and the changes in the blood concentration connected therewith may also be of some significance. They cannot be supposed, however, to be the chief cause of the blood-crisis; the motley changing of the blood-picture hardly is consistent with such

a supposition*. Here we must assume a new growth, namely, a pumping into the blood system of leukocytes from the bone-marrow; this view being favored by the almost constant appearance of neutrophile myelocytes, especially near the close of the blood-crisis. A real hemolysis also is to be assumed—an interesting parallel to the periodical increases in the "N-ausscheidung," (nitrogen elimination) occurring in lunatics.

These blood-crises I have found in the case of patients who had been suffering for more than twenty years, and I have observed them also in fairly recent cases. It seems justifiable, therefore, to consider them a constant phenomenon.

These blood-crises often pass without perceptible symptoms. Only if they are sufficiently intense or have lasted for a sufficiently long time, they are attended by phenomena of physical irritation. Consequently these crises which may partly appear without perceptible mental disturbances, partly precede (often by days and weeks) the physical disturbances, the state of excitement, cannot be considered as the result of increased muscle work or of physical excitement.

An Explanation Suggested

The most natural explanation seems to me to be the assumption of a toxemia, of whatever kind that may be†. And as we do not now hesitate, in the case of many infectious diseases, to see in a strong leukocytosis a sign of the protecting processes going on in the body, whereas we assign to leukopenia a bad prognostic significance, because we see in it a sign of the diminished fighting-power of the body, it does not seem to be presumptuous to apply the same point of view to the case in question.

Thus, then, the leukocytosis we meet with in the blood-crises is a sign of the activity of the organism, the struggle of the organism against the cause of the disease.

Sodium Nucleate: A Promising Remedy

He who is really convinced that dementia præcox depends upon material causes must also feel it his duty to find a remedy. He cannot possibly feel satisfied with the expect-

tative treatment we now give our patients. Moreover, the idea of trying to find a somatic treatment for dementia præcox, as well as for other diseases, is by no means an unfamiliar one. On the other hand, many signs go to show that the disease is accessible to psychical therapy.

We have long known that certain intercurrent diseases often influence dementia præcox in a striking way. Abdominal typhus no doubt is most known in this respect. In another publication I have pointed out that the important thing in this case is the hyperleukocytosis which regularly develops after typhus. The idea suggests itself then, to call forth by deliberate infections or by other, less dangerous means, an increase of the leukocytes; and in paralysis such an artificial hyperleukocytosis has been resorted to. Occasionally some case of dementia præcox may also have come under treatment. Thus, in 1910, Pilz administered tuberculin, with good results, in katatonia.

I have paid attention to dementia præcox exclusively. After trying a great many other substances, I eventually fixed my choice on sodium nucleate, or, as we say here, natrium nucleicum.

However, I thought I observed that the patients became accustomed to the remedy too quickly when the treatment was long continued, responding less even to increased doses. For this reason, I have, for some time, combined the nuclein with other remedies likely to increase the leukocytes, namely, hetol and arsenous acid. Now I use exclusively the following combination.

Formula for Lundvall's Nuclein Mixture

R Quassinisicci depurati (Merck)	Gm. 40.0
Sodii nucleatis.....	Gm. 200.0
Acidi arsenosi.....	Gm. 0.1
Aquæ destillatæ, q. s. ad.....	Cc. 1000

The ordinary doctor can very well prepare this solution himself; but inasmuch as it is somewhat difficult to obtain a clear and tenable preparation, it will be better to have it prepared by an apothecary. (The chemist's-shop "Hjorten" at Lund keeps it on hand, sealed in sterilized ampules holding 5 and 10 Cc., respectively.)

Mode of Administering the Nuclein Mixture

Of this solution a dose of from 2 to 15 Cc. is injected hypodermically twice a day. It may be mentioned here that at the site of the injection there appears a more or less painful infiltrate, although often this is inconsiderable. In order to lessen the pains

*Compare the circumstances in manic-depressive insanity!

†The results obtained with the Abderhalden reaction seem, perhaps, to suggest that there circulates in the blood the abnormally decomposed albumin from the genital glands. The primary cause, perhaps, lies deeper still, so that the dysfunction of the genital glands, i. e., the toxemia, the morphologic changes in the blood, and the psychical disturbances are merely symptoms of the same pathologic state. We do not know which of these three symptoms appears first; but everything goes to show that the psychical disturbances appear later than the morphologic changes in the blood.

and accelerate the resorption, I apply, during the first day, a cold compress, while the second day I begin with a cautiously applied massage, which is continued until the infiltrate has disappeared.

Some hours after the injection, a strong rise of the temperature and the number of leukocytes ensues, combined, occasionally, with spells of shivering and a feeling of illness. However, the elevated temperature generally recedes rapidly and usually is on its downward grade after twenty-four hours; still, now and then slight increases of the evening temperature will appear for some days afterward. The leukocytosis runs tolerably parallel with the course of the temperature, although usually it sets in some hours earlier, and persists for a day or more after the temperature is at normal again. Still, this parallelism is not pronounced, and leukocytosis not infrequently is found without there being an increase of temperature. Nor is the time for each new injection to be determined by the curve of temperature, but, instead, by the number of the leukocytes.

Since the purpose of the treatment is not, to throw a certain quantity of the remedy as quickly as possible into the patient's body, but, on the contrary, to sustain by the smallest possible doses a leukocytosis for as long a period as possible, there is no fixed rule for the dosage, and, so, one has to feel his way in each individual case.

Above all, it is useless, a labor thrown away, to content oneself with only a few injections. If the patient has acquired immunity to the remedy, so that no effect is produced even by large doses, it is best, temporarily, to interrupt the treatment and, after a while, resume again.

During the course of this treatment, the patients should be kept on a highly nutritious diet, and preparations of lecithin may, perhaps, be of a certain value.

In the presence of cardiac diseases and of phthisis, the treatment is contraindicated, or, at least, great caution must be exercised.

The injections nearly always are followed by improvement, lasting several days, in the patient's psychic state. When evaluating the results of the treatment, however, I have not taken this factor into consideration.

Before passing on to the account of my own cases, I will mention certain experiments conducted by others at the same time as mine, or later.

Lepine found, out of 12 cases of dementia præcox treated with sodium nucleate solely, a slight improvement in 3 of the patients.

He gives no information, however, of the total doses he used, whence it is impossible to decide whether the treatment was carried out with all the energy required.

Itten has treated 9 serious cases, and in 3 of them observed a temporary improvement. One must say, though, that 4 of his cases, at least, had insufficient treatment. For, 2 patients received only 3 injections each, with a total dosage, respectively of 3.8 and 3.0 grams of sodium nucleate; 2 other patients received only 1 injection each, containing 0.8 gram. On an average, his patients received 5.8 grams of the nucleate. I have emphasized already that, if the treatment is to demonstrate anything, it is indispensable that one try to keep up the increase in the leukocytes for as long a time as possible.

Out of Donath's 14 patients, 3 were cured, 5 were improved (2 of these able to work), 3 showed signs of improvement at first but then deteriorated again, and 3 remained uncured.

Hauber has treated 20 patients, 12 of whom were diseased a long time and already considerably demented. In 2 cases, the treatment was not finished at the date of publication; in 1 case, the treatment had to be interrupted on account of a recrudescence of phthisis. Seven of them could be discharged, subject to more or less severe remissions.

I myself have treated, in the manner above described, 25 patients, many of whom were old and their cases hopeless. Out of these, 11 could be discharged as clinically cured; 2 could be discharged not quite cured but able to work; 5 showed signs of improvement, but only temporary or else not considerable enough to permit of their leaving the institution; 7 remained uncured.

If, now, we take into consideration only those cases in which the treatment was finished, the results are these:

Of Hauber's cases, 37 percent could be discharged; and that in spite of the fact that 70 percent of his cases were old dement cases, i. e., with irreparable cerebral changes already developed. Of Donath's cases, mostly rather recent, the cured and improved aggregate 57 percent. Of my own patients, many of whom, however, were old and helpless, 52 percent could be discharged, while 20 percent showed signs of recovery, although temporary only or too slight to allow of discharging them.

However skeptical one may feel about this form of therapy, the results thus far obtained are quite too obvious to be neglected or to be passed over as spontaneous recoveries. More-

over, since the treatment is so simple as to be applicable by any ordinary practitioner, it certainly seems to be our duty to give it a trial, for so long at least as we are in want of a specific therapy.

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Sodium Nucleate

For the Induction of Artificial Leukocytosis in Dementia Præcox

By BAYARD HOLMES, M. D., Chicago, Illinois

THE CLINICAL MOTIVE

SINCE the use of sodium nucleate, as recommended by Halvar Lundvall, of Sweden, less than two years ago, in form of a subcutaneous injection, for the production of an artificial leukocytosis in patients suffering from dementia præcox, many very remarkable and almost incredible recoveries, although also numerous disappointments, have been recounted. After a single dose of this remedy, a patient mute for months has talked, asked questions, and started on a protracted improvement. Other patients have shown no reaction and no improvement after a considerable number of injections, and even after heroic and vigorous use of the remedy.

It is entirely too early at the present time to come to any definite conclusion relative to the worth of this treatment, nevertheless it is time that a review of the experience of medical men that led up to its use should be reconsidered.

In one hospital, where 20 patients received a very moderately vigorous treatment, the results were quite hopeful and were pronounced in the following particulars: The trouble of every one of these patients had been clinically diagnosed as being dementia præcox. Some of them had been in the hospital a long time and some only a few weeks, with the usual attending deterioration and decline. Every one of these 20 patients under this regimen, made some gain in weight and improved physically; no one of them was made worse by the remedy; and, yet, only 5 of the 20 were sufficiently

benefited to be discharged from the hospital. One of them has been actively at work, for wages, ever since he left the institution. Half of the remainder were somewhat improved mentally, but 7 experienced only a little, if any, mental improvement.

Dr. F. B. Williams, of Lincoln, Nebraska, has reported, in the last number of *The Alienist and Neurologist* (vol. 35, p. 414), upon his use of the nucelin in 12 cases at the Lincoln State Hospital. He administered rather large doses. He had a variety of patients, all with the diagnosis of dementia præcox; among them, 8 were katatonic, 2 were hebephrenic, and 2 were paranoid. Under the treatment, 3 patients became distinctly worse after the injections, which were begun August 10, 1914, and continued less than four months; 2 showed no change at all; 3 were physically improved, but mentally unimproved; 2 were slightly improved both mentally and physically; 2 were markedly improved both mentally and physically.

It is not often that anyone claims that one-sixth of his cases of dementia præcox improve under any sort of treatment. It is generally presumed, though perhaps not often so stated in print, that the prognosis in dementia præcox is absolutely unfavorable. To this, the exceptions are so few that it is hard to get an alienist to admit that even a single patient under his observation has recovered permanently. One alienist of unusual clinical experience said in conversation with me that he believed *one* such patient whom he had observed early in his experience,

had recovered and had remained well and uncommitted to an institution up to the present time or, twenty years. This was the only experience of the kind that he could remember.

Data About the Induced Leukocytosis—and Some Typical Examples

Physicians who have undertaken to employ the sodium nucleate according to the directions of Lundvall have uniformly reported the efficiency of the drug in producing a leukocytosis.

The remedy has been given in doses of from 1 to 20 cubic centimeters of the solution recommended in my article in *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* for May, 1914, page 396. The number of leukocytes was determined immediately before the injection and at suitable intervals afterward. It has been distinctly noticed that in some instances remarkable and rapid improvement took place, and in these cases the number of leukocytes had increased to 20,000 or more; in other patients, however, the rise in leukocytes was small and slow and the improvement inconsiderable or transient.

The duration of the leukocytosis is another unexplained peculiarity in this connection. In most patients, the leukocytes appear at their maximum after twelve hours, then gradually decline, so that at the end of six or ten days they number below 10,000; in other patients, on the other hand, the leukocytes rise to 25,000 or more and remain above 20,000 for several weeks.

In the case of A. P., a paranoid Swede, 21 years of age, 6 feet and 1 inch tall, and weighing 152 pounds at the beginning of the treatment, the most pronounced and protracted leukocytosis appeared after the injection of less than 5 cubic centimeters of the Lundvall solution. After one ordinary injection, his leukocytes rose to 35,000, remained above 25,000 for four weeks, and gradually decreased to 15,000 at the end of five weeks; at which time another dose was given. This patient improved both physically and mentally. He had no unusual pain from this injection and no more induration than usual.

It will be observed that in most instances the eosinophile blood-cells keep up, in the artificial leukocytosis, to the normal of 2 1-2 percent, or even a little higher; the neutrophiles remain about normal; while the polynuclears rarely exceed their normal proportion. In one instance in which the eosinophiles increased more rapidly than did the

other blood-cells, the patient showed a most rapid and permanent improvement. He was a Jewish boy who had been confined in two different institutions. The diagnosis everywhere had been that of dementia præcox, and when I first saw him I confirmed this diagnosis by every physical means.

After the first injection, this boy "changed his mind," as he said, and "no longer thought of suicide and starvation." He began to take food voluntarily and, although being under anything but favorable conditions at his home, he has gained 25 pounds. He went to work in February, 1914, and has continued at the same job ever since. When last I saw him, in October, he weighed 146 pounds, and he was tidy and orderly in his dress and modest and animated in conversation. The treatment was continued for only two months, the leukocytes being kept continuously above 15,000. The injections were given as often as twice a week, as guided by the blood count. The eosinophile cells were conspicuous and above 3 percent. This boy noticed that his beard and mustache grew unusually fast after the injections were begun.

Some Interesting Cases

The katatonic granddaughter of a physician had been mute for several months and had refused food, so that often it became necessary to feed her with a tube. After the injections were begun, she took notice of things about her, asked for her clothes, dressed herself, and did up her hair with great care and circumspection, spending an unusual time with the comb and brush. She became perfectly tidy and fed herself. eating at the table with the family, a thing she had refused to do for more than a year. The treatment was begun in June, 1914, but was discontinued in September, when, owing to her activity and lack of self-restraint, it became necessary to take her to a custodial institution.

The son of a physician, while attending a military school, came down with typical symptoms of dementia præcox when he was 19 years old. He was sent to a sanitarium in the West, because some restraint was necessary. He began to take the sodium nucleate in September, 1914, and since that time has made such improvement that he no longer has to be restrained, is active and curious, and wishes to continue his studies. He rides alone on horseback and goes to and from his private tutor without a companion. His parents are greatly cheered and hope for permanent improvement. The reac-

tions were very pronounced under a dosage of 6 or 8 cubic centimeters of the remedy.

Uncertainties with Nuclein

While there can be no doubt about the beneficial effect of the sodium nucleate in at least one-sixth of the cases of dementia præcox, the action of this remedy as now given is uncertain and fickle. One patient in particular illustrates this fact.

This man had always shown a lively reaction to 4 cubic centimeters of the Lundvall solution. The preparation had been acting very satisfactorily in his case during the six months immediately following his return from the Watertown State Hospital, where he had been kept for nearly two years. After each injection, his leukocytes always rose to 20,000 or more, and continued above 12,000 for about two weeks. When the leukocytes fell to the latter point, another injection would be given. From the first, he improved considerably, both physically and mentally. He gained in weight, the condition of his skin improved, acne disappeared, and his tongue and gums became more normal. He also read the newspaper and kept up a very fair social life with his neighbors.

Then it happened that one bottle of the Lundvall solution failed to induce any reaction. At first it was thought by his physician that the patient had become immune; consequently, a larger dose was administered. This produced but a very trifling reaction, and then for the third dose a site in the leg was selected from which absorption would be rapid. Still there was no reaction. Therefore a second bottle of nuclein solution was obtained, and the usual 6 Cc. dose was followed by a reaction as lively as ever before. What remained of the first bottle, however, afterward was used up in the case of two or three patients and they exhibited a moderate reaction as to temperature and leukocytosis.

I have just received a letter from the young man referred to, and his chirography is strong and regular, his spelling good, and he writes a clear and consequential plea to be allowed to go to school this winter. He tells me that he has behaved all summer and that he has worked some; that since his mother's return from a sanitarium for tuberculosis, she has not done well, still stays in bed all the time in her tent house, and that she probably will not live very long. He thinks that the family relations are not very good and that there is too much disputing between differ-

ent members of the family. He says that on this account he would be a great deal happier, enjoy himself better and get well faster if he went back to the school, which he was obliged to leave two and a half years ago. To my certain knowledge, there is too much disorder and too much friction in his family.

The Probability of Cure or Betterment

The efforts made to find a remedy for this disease have been numerous. Mercury was found to be a specific remedy for syphilis before the cause of syphilis was known. Quinine was used against malaria before the causative parasite was discovered. For amebic infection, emetine is almost specifically potent for cure. There is no reason in medical history why a remedy might not be found for dementia præcox even before we know the etiology of this terrible disease. As a remedy for cancer has long been sought, even though its cause is a mystery, so many methods have been employed to cure the adolescent insane, although thus far without much success.

A remedy usually is selected for trial with some analogy or some special theory in mind. When the vaccines were coming into use at the end of the last century, Binswanger (*Arch. f. Psych.*, 30, p. 664) used injections of sterilized cultures. Cullerre, of Lyons, and De Boeck, of Belgium, made similar experiments at about the same time (1898-1899).

The clinical experiments leading up to the use of sodium nucleate were reviewed in my previous article. It has never been suggested by Lundvall or anyone using the sodium nucleate that this remedy is a specific. It has simply been a method of increasing the army of repair and of resistance in the blood.

There can be no doubt that dementia præcox is a consequence of a toxemia. The character and the source of the specific toxin are unknown. There are times when an individual suffering from this toxemia seems successfully to resist its baleful action, and to improve or actually recover. Let us suppose, for example, that the resistance of a patient to the toxemia of the disease is represented quantitatively by 100, and the power of the toxin by 120. Under such a condition, the patient succumbs to the increasing toxemia. If by any means the resistance of the patient can be increased to 130 or more, the credit will be on the side of the patient and improvement or recovery will take place.

It has been argued by many and assumed by us that a leukocytosis increases the resistance of the patient to any toxemia and especially to the toxemia of dementia præcox. If this increase is sufficient in any case to overreach, with the natural resistance of the body, the toxic elements of the disease, then improvement or recovery follows. Such a conception emphasizes the need of using all accessories and surroundings favorable to recovery from a condition of unknown origin.

Let us consider now several factors in this problem, namely, the nucleates, the leukocytes, and the presumptive toxalbumin of the disease.

The Nucleate of Sodium

It is perhaps worth while to consider for a moment the relations of the nucleate of sodium to chemistry, pharmacy, and medicine.

The nucleates always have held a novel and conspicuous place in the attention of chemists and physiologists because nucleic acid is derived from the nucleus of the cell.

In 1868, Friedrich Miescher, of Hoppe-Seyler's laboratory in Tübingen, undertook the chemical examination of pus. He secured a great amount of surgical dressings from adjoining hospitals and carefully washed the pus-cells out of them with a dilute solution of sodium sulphate in water. After standing for a time, the pus-cells settled to the bottom of the solution and were then separated by carefully decantating the supernatant liquor. The residue thus obtained was washed several times, and finally the cleaned pus-cells were suspended in a dilute salt solution. The outer protoplasm of the cells now was removed by digestion in artificial gastric juice. The resulting nuclei of the pus-cells were still further purified and at last dissolved in a dilute sodium-carbonate solution. From the clear solution thus obtained, acetic acid brought down a flocculent precipitate, which Miescher called "nuclein," because he supposed this substance to be the base of the nucleus. He found it to contain phosphorus, and it responded to the color-test for protein.

Experiments with Salmon

Miescher afterward went to Basel and became engaged in the study of the chemistry connected with the salmon industry. He took advantage of his position there to go on with his study of nuclein. He was able to prove conclusively that the salmon, entering the Rhine, for the purpose of ascending to the breeding-grounds at its sources, took no particle of food into their digestive tracts

from the time that they left the sea until after the eggs were deposited. Their alimentary tracts were absolutely empty and their digestive fluids were inactive. The reproductive organs, however, had grown enormously, while their muscular tissues had been gradually consumed. The eggs and the milt (spermatozoa) had been formed from muscle-tissue protein.

During the spawning-season, great quantities of spermatic fluid can be pressed out of the male fishes. Miescher found that the milt was composed of spermatozoa suspended in a dilute salt solution. He recognized fully from his study of comparative histology of the genital organs that the head of the spermatozoon corresponded to the nucleus of the cells of the testicle from which it arose. The tail of the spermatozoon constituted a very insignificant proportion of the body and could easily be dissolved away.

Thus, Miescher had at hand an enormous quantity of extremely pure nuclei for chemical study. He was not very long in determining that the head of the spermatozoon of the salmon was a combination of protamin and nucleic acid. From this discovery on, the study of the nucleins has been a most prolific, fruitful, and suggestive field of chemical research.

Most of the nucleates of commerce are derived from yeast; strangely enough, the yeast-cell has no recognizable nucleus itself. Hoppe-Seyler prepared nucleates from yeast in 1871. It was early observed by him that the properties of the nucleic acid of yeast and the properties of those nucleic acids derived from salmon milt were chemically different. Still later, other investigators (e. g. Lilienfeld) prepared nucleic acid from the thymus gland of calves, and this latter product showed a still greater deviation from that of yeast in many of its hydrolytic features. The method of preparing thymic nucleic acid has now been perfected and has been described by Walter Jones. Much study has been devoted to the chemical side of this subject; still, the physiologic side has not been as well cleared up.

Kossel found that nucleic acid from yeast differed from that of thymic origin, and subsequently it has been demonstrated (Stephan) that the yeast nucleic acid, upon hydrolysis, yielded phosphoric acid, four purin bodies, namely, guanine, adenin, cytosin, uracil, and a ferment termed pentose; while nucleic acid derived from the thymus gland yielded phosphoric acid, guanine, adenin, cytosin, and thymine, besides a ferment

termed hexose. These findings have been confirmed by a great number of biochemists, so that Stephan declares that these facts are among the most firmly established conclusions of physiologic chemistry.

Now, every purin body contains the radical C_5N_4 , which, combined with H, gives a purin formula $C_5H_4N_4$. If an amid element, NH_2 , combines with a purin element, we have adenin, $C_5H_5N_5$, the first purin body in the hydrolysis of both nucleic acids. If, then, the adenin take on an acid atom, O, we have amino-oxy-purin, the so-called guanine, $C_5H_5N_5O$. If the purin unite with O directly, then we have $C_5H_4N_4O$, oxy-purin or hypoxanthin. If the purin unite directly with the O_2 , we have $C_5H_4N_4O_2$, i. e., xanthin, or di-oxy-purin. If, again, the purin unite with O_3 , the result is tri-oxy-purin, $C_5H_4N_4O_3$, i. e., uric acid, or uracil.

This series can best be appreciated by the following table:

By hydrolysis the end-products are:

THYMUS NUCLEIC ACID	YEAST NUCLEIC ACID
A. Phosphoric acid, PH_3O_4	A. Phosphoric acid, PH_3O_4
B. 1. Adenin, $C_5H_5N_5$	B. 1. Adenin, $C_5H_5N_5$
2. Guanine, $C_5H_5N_5O$	2. Guanine, $C_5H_5N_5O$
3. Cytosin, $C_4H_4N_4O$	3. Cytosin, $C_4H_4N_4O$
4. Thymine, $C_5H_4N_4O_2$	4. Uracil, $C_4H_4N_4O_2$
C. Hexose	C. Pentose

There is, then, a considerable difference chemically between nucleic acid from yeast and nucleic acid from the thymus gland of calves. If these chemical differences between the acids are carried over and exhibited in the sodium salts, then we might expect a corresponding difference in their physiologic reactions and, consequently, their therapeutic usefulness. This matter will be presented in the following portion of this paper.

An Old Doctor's Life Story

An Autobiography

By ROBERT GRAY, M. D., Pichualco, Mexico

EDITORIAL NOTE.—*This autobiography is distinctly unusual. It is not the usual trite story of medical triumphs, but rather the intimate record of the unfolding of an unusual life. Doctor Gray was born in the Old South, was educated in France under the old regime, fought through our great Civil War, and soon after plunged into the very depths of tropical Mexico, where he has spent his life. We promise you in this autobiography one of the most interesting series that it has been our privilege to offer.*

THREE SUBTLE MYSTERIES

NUMEROUS letters of many forms and shades and degrees of persuasive importunity have found their way down here into the dreamy gossamer of tropical enchantment, seeking to conjure into the limpid daylight of the realm of bright life an *autobiography*.

Part of the foregoing words might seem to justify the inference that sable gloom pervades these haunting lurks of mystery, where the balmy atmosphere eternally distils the quintessential perfume of ten thousand flowers, responsive to the winsome smiles of never fading summer. Aye! here angelic attributes might make a paradise, to rival that which the inspiring genius of Milton made Eve so pathetically lament. The shadowy frowns that darkle over the fair face of Virgin Nature are offsprings of war—inhumanity of man to mankind—breeding diseases that decimate the race in these lands.

An autobiography is a delicate proposition; and often would be more interesting

if overbrimming with little things the author may deem too insignificant to recount. Little sideshows scattered along the backward track of life often are more interesting to the reader than the more imposing scenes enacted on the public stage. The inward, or double, life of a physician, that which one naturally would keep behind the scenes, should permeate the practical story, even in a predominating degree. I have been advised by professional men of the first grade, to meet the expectation of a critical fraternity, maybe rather more human than professional.

I have ground out many medical contributions without the will, some of which were not criticized out of countenance, though not one was ever up to the standard to enlist my own enthusiastic approbation; for which reason I am reluctant to essay the pending task.

Naturally I have no means of even adequate conjecture as to the occult life of any medical man, living or dead, and do not believe such true story has ever been told. However, it seems to me that I need not be

squeamish about lifting the mask from such integral elements of my own life. Whatever of my clandestine life may have been inimical either to social or to ethical propriety, if such be recorded for eternal accountability, as men esteemed holy have affirmed is the fiat of Fate, my professional confession certainly could not seriously prejudice inevitable destiny. If the quips and slips of imprudent straying must be unmasked beyond Futurity's veil, why wince and squirm about revealing them to flesh and blood, when they might prove a mirage reflecting to others the waywardness of themselves?

I believe that we are all agreed that *the saintly* is not an element of human flesh and blood. Most of us have a swaying proneness to stray in devious paths; actuated by diverse influences, maybe scientific, maybe carnal. Let us not mince terms in the dissection of professional anatomy. We are barnacled with shady truths rarely recognized. Let us unmask and expose our purulent leprosy; so we may not delude ourselves, however much we may deceive the world.

The actuating motive to write such an autobiography should be, to lend helpfulness to members of the profession who have not met the experiences outlined in the pages of such essay, as well as to show the doctor his own foibles and follies, which he rarely pauses to contemplate himself.

For now more than three decades I have been esteemed *the model man* of this broad, far-expanding tropical realm; and, truly, my life has been the veritable semblance of a perfect Anchorite; yet, it must be remembered that before the inception of that fairly blameless epoch, I had lived out the years most medical men rarely pass. A doctor fifty-five years old is not as wayward as he may have been at twenty-five. Wasting time unteaches some hapless lessons it were better never to learn. But what are you going to do about the human nature in the doctor, any more than that in the priest?

In my long career of intense vicissitudes, I have been absolutely true to no more than three principles: the preservation of my health; the Confederate cause; and my professional obligations, in all the bearings of their multiple relations.

The first of the three subtle mysteries with which an autobiography should deal is early life and the predominating influences that mold and guide the precarious adventurer through the meandering labyrinth of tender years. Not all endowed with talent and capabilities to ascend to the plane of aspira-

tion are favored with requisite opportunities to prepare and arm themselves to cope with the formidable obstacles that inevitably intervene. As to the adaptability of the presumptive material, there rarely are widely diverging grades of superiority and inferiority, all being so nearly on a par that the impulse of equal advantages would leave but few in the straggling rear of mediocrity.

On the Threshold of Life

I presume that scarcely one in a hundred has the favorable start that was mine, with no check nor setback anywhere. Credit for having battled successfully against direful opposing difficulties I cannot pretend to claim; because I knew not the practical definition of such combat, save that I was forced into a profession contrary to my predilection, in which I had sufficient common sense to acquiesce and make the best of what I could not honorably escape.

The years passed under the friendly roof of the venerable and ever venerated Alma Mater comprise the epoch of destiny-making influences, which expand and unroll the preparatory exercises, or else mar and blight to deterioration, through contact with deleterious association; for, there ever are some collegiate black sheep in the best-selected and most-carefully groomed flock that ever met under the brooding wing of the most benignant curriculum; and they exercise a pernicious sway over other shallow pates, more taken to passing frivolities than serious preparation for the coming battles of life. Ambition and family pride often save those who succeed in the first grade.

In saying this, I certainly do not refer to all who carry home such a diploma; for, many unworthy of such distinction are coached and bolstered through examinations; they could not legitimately pass; nor does this imply that some such do not finally succeed in making of themselves fairly competent clinicians, because sheer remorseless necessity sometimes stimulates studious activity and indomitable application that better-qualified graduates do not prosecute. An incompetent bright mind frequently masters such deplorable deficiency before there is an outside suspicion of its existence, and covers up and remedies it with an energy spurred by despair. What is more maddening to a proud and lofty mind than the haunting specter of failure in a profession wherewith his all in life is embarked?

Between the admittance to college and the gaining of the diploma is the epoch in which

the second mystery develops or slumbers in heedless apathy. The collegiate mystery often is as evasive as the intangible form of a haunting specter, that seems invisibly flitting near.

The third mystery nestles, from the threshold of the college, as a phantom sphynx, all along the stony pathway of thorns, to the portal of the Silent City! And what Never-Told Medical Mysteries are strewn along the dreary tracks of so many desolate backward tracks! I shudder at the bare memory of the experiences personally familiar to me. I have letters upon letters from the widows of young and middle-aged doctors who fell by the wayside, leaving their hapless families in pathetic destitution. And from such unmarried aspirants, blighted and withered on the stalk of Hope, trembling on the brink of premature graves—victims of dissipation or insufficient constitutional stamina—while others were the victims of heroic martyrdom, voluntarily sacrificed in the shambles of slaughter of immolating epidemics. What is more admirably beautiful in our dark mortality than the vision of medical heroism, emerging from the salubrious freshness of mountain refuges, to plunge into the insatiable jaws of ravenous pestilence, amid the fetid marshes, seething beneath the vertical glare of the torrid sun? These are horrors fortunately unknown to most of those who are likely to linger in pensive scrutiny over this mournful portraiture of our intrepid brothers, who undauntedly enter with blanchless cheek "where Minerva might quake to tread!"

Our noble and ennobling profession is inseparable from faults and frailties, yet, so invincibly heroic amid the darkling menace of wondrous peril, where I never have heard that a white feather was seen above the pausing footstep of a medical hero, that the grandeur of soul submerges and eclipses all that which might else be deemed wicked and vascillating; till it seems to me that the recording angel sometimes must be impelled, under the sheer dictates of admiration of mortality above all that is mundane, to liquidate all transgressions and pass a handsome credit balance to a new account.

A Promise

Should this essay develop any modicum of tangible merit, the net result is hereby dedicated to the most distressed and needy elements of the medical profession, whether as a home for invalid indigent doctors, or, otherwise, as may be most conducive to

such wants as may be determined by a committee to be selected by the editors of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE*.

As a personal financial enterprise, no sum ever paid for a literary venture would induce me to write one page of the many pages I must deface. I have no need of money to be earned by bending me over the drudgery of composition; and anyone who writes much or but little must readily realize that this is no festival task for a man eighty-five years of age. Yet, actuated by the double motive of helpfulness to stray doctors and of possible assistance to some bereaved families left by others who have perished in harness, I can ignore the inconveniences of the task with the same cheerfulness with which I respond to the call of a desperate patient really inconvenient to visit.

The Tempestuous Midnight

October, 1829, amid the weird purple of the lamp flickering in a stormy midnight, that infantile squeak familiar to the midwifery of earth announced that I had been ushered into the sweeping surge of breathing humanity, the warring elements prognosticating the wild and turbulent life I was to experience through the violent vicissitudes of so many terrible years. And, can it be possible that I am starting to live them over anew, as the mocking specters flitting over this growing page seem to indicate?

I was told, in due course of time, that the phantom shadows of night were rife with the predictions of my ancient kinswomen; that the 31st verse of a chapter in the Bible presaged that the horrors of war were of my troublous destiny, that verse corresponding with the day of the month of my birth. But I have long since forgotten what chapter was the malicious prophet whose divination seems to have been verified with cruel accuracy.

Long years ago I knew something of the geneology of my family for some five or six centuries back, including the lapse of time since the age of blending with the Jamestown settlement; but now I can recall nothing sufficiently positive to place into a living page, more than that the mother of my race and line in the United States was bought with 500 pounds of tobacco at Jamestown; and that the men lived out their century, save when violence of war or accident intervened. Nor can I recount how my immediate family became extensive land- and slave-owners—the status at the time of my birth.

The kinship feature of my tender years centers around a cousin of my father (that

is of vital importance to these pages), who had been a nun for fifteen years, having escaped from the shipwreck of love to a convent, the nature of the affliction in the soft side of her heart not being legible on the tablet of my memory at this late day. She had been educated at Paris ere her advent in the sisterhood—that womans' sable orphanage of the heart—whither she took refuge, to dawn, it seems, upon me like a fragment of a half-forgotten dream, because her lover had a slave-mistress—an unpardonable crime in my family.

That good woman was a professor in a nearby college and lived in the home of my father. She had studied medicine in the convent. Ere I could clearly articulate, she had taught me to read; and her care of my mental development was as persistently delicate as that of a fond girl nourishing an exotic plant of extreme tenderness.

The church dominated her communicants with an iron despotism, balls and ordinary sociables and the reading of "unholy" literature being interdicted with relentless severity, while parents were admonished from the pulpit, Sunday after Sunday, not to spare the rod in the dicipline of their sons.

I had a wealthy uncle, a bachelor, the brother of my mother, ever at open rupture with the church, who contributed much to my early mental training, by supplying me clandestinely with literature not permitted in the family (certain classics and poetry and scientific essays, approved by my preceptress, when I was early nominated a martyr to medicine) of intrinsic helpfulness; for, in that age there was a great dearth of such literature in family circles, due largely to the influence mentioned, as also to limited production at moderate prices.

My father and his near relatives were extensive distillers of apple and peach spirits and manufacturers of plug and smoking-tobacco; also producers and buyers of leaf tobacco. In addition, they had, in copartnership, big water-power saw- and grist-mills, carpenter-shop, cooperage, and black-smith-shops.

I was permitted to tinker in all the shops while I was yet too small to do much, but finally learned to make a good barrel, do neat carpenter-jobs of trinkets, and make anything I desired of iron and steel. I was a good swimmer in the vast mill-pond that rivaled a modest inland lake, while still too young to have been permitted to venture so far; and I rode colts of one and two years, without bridle, in a great stumpless pasture,

clinging to the mane, till the animals tired themselves gentle, after first standing on their hind feet, plunging and running furiously; they having been caught by slaves clandestinely and held till I was securely mounted—adventures unknown to my father, whose rigid compliance with church-mandates early made a rebel of me in more than one eventuality. Thus I early developed into a powerful athletic boy, far in advance of my years.

The First Amour

Then, amid that sagacious guidance, strict family life, and under pious environment, there appeared upon the scene the temptress fair—

Here fond Zuleika woos with open arms
The Hebrew boy, who flies from her young charms,
Yet, flying, turns to gaze, and, half undone,
Wishes that heaven and she could both be won.

But, alas! I was less firm than Joseph, or lived in a more elastic age; and whether with or without inclination, I had not the same means to fly. I was very young. I am unable to fix my years at the inception of the lapse from the heroic attitude of Joseph, though I was very much younger than my appearance indicated.

The object blended with me in the dark intrigue was a young woman maybe of eighteen summers or slightly less, a seamstress in the family, of good parentage, whose family had been impoverished, I do not know how; because her mother and mine had been classmates at college, the erratic daughter found a home under the friendly roof of my father.

In those old plantation houses inside doors were not bolted nor barred. There had never been a word of private conversation between the girl and me. Yet, I awoke one night and found her in my room. When she realized that I was awake she whispered me to be quiet; she was my companion; and that no harm would befall me. I was naturally more alarmed at the danger of exposure than she could have been, as my father would have believed that the initiation was my crime, and would have punished me accordingly.

Thus the mystery of mysteries of creative mortality was revealed to me amid the haunting silence of weird night, the imaginary creaking of the stairway resounding under the stealthily approaching footstep of my father, who all the while was innocently sleeping in a distant wing of the house.

I am unable to recall the length of time that elapsed meanwhile those nocturnal visits continued; but I remember certainly that there were three Christmas holiday seasons celebrated.

In my sober, cold-blooded conception, I now believe that this intimacy for such a long lapse of time developed premature puberty, two years in advance of its age. But there is to be considered that a few nights after the last visit of the girl, I began to read the works of Voltaire and Rousseau in my room at night, obtained from the library of my uncle, desisting only when the candle burned out; and that I had no resource whence to feed such untimely appetite, had it been established more positively by continued indulgence at the time it was abruptly deprived of its vicious companionship.

But do not understand that I am playing the "goody-goody" act of Adam, by pretending that all the blame was on the part of the woman; because my door was provided with strong double bolts, which were never slipped in their sockets. Nor do I claim that I might not have invited the visits, at a later period of life, had there been any temptation flung in my way, indicating that intimacy might be acceptable. Yet, I had never had such mere passing suspicion that the girl might have been capable of any degree of imprudence, till I awoke and found her in my room. She married and soon migrated to the far West. I never met her after she left my room the last time.

Natural puberty developed some two years after my unfortunate intrigue was interrupted, which did not seem to have prejudiced my health.

The Sweetheart and the Daredevil

In the meantime I had a legitimate sweetheart, whom I went to visit every Saturday evening, we being left to ourselves in the parlor about eight o'clock, the mother rapping on the door when she deemed that the séance should close. We were playing chess one evening, heedless of all else save the

rap on the door, which we awaited, till the plantation bell rang the morning-call to the people to wake up. The mother had slept. I never in all my life passed another night so sweetly short.

Another night she was playing on the piano and singing, I standing behind turning the leaves of the music. At the conclusion of the piece she swung round the revolving seat facing me, and seemingly in a freak of mischief turned up her face toward mine. I have never realized what possessed me. But I kissed her. She arose furiously, saying, "Robert, if you ever dare attempt such atrocity again I shall tell my mother; and you well know the consequences." I grabbed my hat and hastened home.

My uncle gave a ball every month to such youngsters as could get out of their homes after the old folks were in bed and return ere they were up. He had fine musicians among his slaves. I slept in the third story at home and had three sisters who slept on the first floor. He provided me with a rope ladder, and hooks to drive under the window-sill to hold it, so that I could get out and back to my room at will when the house was closed. But I was absent from the party the week after the scene with my sweetheart and made no other visit, nor even wrote her a note, till the ball a month later, when I found her there on my arrival with my sisters, whom she at once kissed, and came toward me, hand extended, saying "what have I done to receive no visit or other greeting for six weeks?"

"And then you have forgotten the scene at the conclusion of my last visit?" I promptly rejoined.

"Hum! and you imagine that I am so foolish as to carry such a piece of news to my mother?" was her reply.

That fairy form and lofty mind—the queenly nympholepsy of poetic despair—became the pure planet of my life in later, far darker years, amid the seething surge of flame and blood, on a fratricidal stage of horrors.

[To be continued]



The Treatment of Pneumonia

By J. G. WALKER, M. D., Iola, Kansas

I WISH to preface this paper by quoting from Elsner's chapter in Forchheimer's "Therapeusis," as follows:

"Therapeutic nihilists have done incalculable harm by their unjustified pessimism concerning the treatment of pneumonia; on the other hand, the therapist who treats disease expectantly and symptomatically, who fails to appreciate the dangers which may often ('tis not always true) be prevented, will finally find himself face to face with alarming conditions, at a time when his treatment will have been instituted too late."

Butler also quotes a noted Chicago surgeon, who "publicly announced that treatment of pneumonia was futile." And Elsner says, "The lay press was prompt to take up this statement," and adds: "It is unfortunate that such pessimistic and sensational literature should add fright to infection and should strengthen the belief in the minds of many that pneumonia has become a synonym for fatality—a conclusion unjustified and one which results disprove."

It is, indeed, refreshing to observe this hopeful attitude in a recent and exhaustive work that emanates from a conservative and orthodox source, and, so far as it goes, is a deserved rebuke to some of the credited authorities who are so fond of whitewashing their failures by saying pneumonia belongs to the self-limited class of diseases, and there has been no advance in treatment since a date before the younger, if not the older, practitioners were born.

Treatment Most Important

The most important branch of medicine is treatment—first, last and all the time. Only to the degree to which our treatment is successful is our practice successful. True, we must arrive at a correct diagnosis and pathology as a solid foundation for the superstructure of active rational treatment. But many there have been who have died of a correct diagnosis.

I have heard of a professor who said to his students: "This patient, as we shall some day prove by an autopsy, has consumption." The patient grew worse and went to a notorious quack who said: "It is not your lungs, it is your liver that is diseased," and he treated him for disease of the liver. In due time the patient died of

the former diagnosis. The professor itched to humiliate his enemy, the quack. So, he secured an autopsy and invited his friends and the quack. Addressing the latter, as he held up the lungs, he asked, "Do you call that a normal organ?"

"No sir, it is badly diseased."

Then the professor held up the liver. "Do you call that a normal liver?"

"That, sir, is a normal, healthy liver," said the quack.

"And you treated this man for liver disease?"

"I did, sir."

"And what did he die of?"

"It is plain," said the quack, "that he died of consumption."

"Well, then," said the professor, straightening up to his full height, with a smile of victory as he looked over his admiring friends: "What have you to say for yourself? You treated this man for liver disease and you say he died of consumption."

"Well, I just have this to say for myself. If you, professor, had treated the lungs as well as I treated the liver, the patient would be a living man yet."

Many have died of a correct diagnosis. We have heard it said more than once, "Make a correct diagnosis, and the treatment is easy." Is it? There are even those who do not take to heart very much the death of the patient if only they can tickle their pride that they knew what was the matter and at an autopsy can say, "I told you so; he died of this." A correct knowledge of pathology and of diagnosis are, indeed, essential, but successful treatment is the all-important thing.

Pneumonia has, for a long time, been called a self-limited disease. That is to say, it is possible for a case to run through the regular classical course of chill, fever, congestion, hepatization, crisis, and resolution, with return to normal health, without any treatment whatsoever. If the vital forces and resisting-power of the patient more than balance the virulency and quantity of the infection, then the patient has a chance to win, left even to nature, in his fight for life; and pneumonia is always a fight for life in which the patient passes hard by the brink of the grave.

And I would hasten to agree with everybody that pneumonia is absolutely a self-

limited disease. If the patient cannot limit and overpower the army of infection that is besieging him and the doctor fails to assist nature to limit the infection, pneumonia, like fire, stops when the building is consumed.

There is no routine treatment for pneumonia. You cannot give every patient the same general care or the same medicines or doses. We must treat the patient as well as the disease.

Importance of Fresh Air in Pneumonia

Every patient should be kept in the recumbent position, but should change from one side to the other even if only for a short time. When possible, an abundance of cold fresh air should enter the room, but without drafts. This may be accomplished by raising the windows and tacking thin muslin over the open space. I believe it is a mistake to keep the room too warm, even though the air is pure.

Doctor Bridges, dean of the College of Medicine of the University of Nebraska, says: "I have come to consider fresh air as a very valuable aid in treatment, even to having the patient in rooms too airy for the well." The eastern hospitals treat cases in the open air, sometimes on the roofs; and Elsner says: "So long as the patient is warm, it does not matter how low the temperature," and says, "pure cold air accomplishes more than oxygen inhalation."

This is in keeping with my own experience. Once I visited a pneumonia patient, who had been doing well at my former visit, and found her cyanotic and suffering intense dyspnea. The parents, disregarding my instructions, had closed up the house and set a redhot stove by her bed. They said they could not get her warmed up and believed she was dying. I was afraid that was to be the result, myself. The family was large and they had all assembled in this small room for the final scene. I requested all to leave the room and shut off the fire, and drew the covers over the patient's head. Then I raised the lower sashes, completely, of an east and a west window and allowed a strong wind, with temperature below zero, to blow through the room, which changed the air instantly and completely. I then lowered the windows and uncovered the patient's head. In a few minutes I repeated the process. All bad symptoms disappeared like magic, and the parents saw to it that there was fresh air during the remainder of the girl's illness. That was the only measure that would have saved that patient, and I was

not sure that even that would do it, so extreme was her condition.

Many of our pneumonia cases are in small rooms. Do not allow unnecessary attendants and by no means useless visitors to use up the oxygen and poison the air by the exhalations.

The patient should be given a warm sponge bath daily, and an ounce of epsom salt may be added to each gallon of water. During the bath the patient should remain entirely passive and the nurse should exercise care not to fatigue the patient. The bath is best given when the fever is highest and may be continued for antipyretic effect or repeated as required. An ice-bag to the head is good practice, as it relieves headache, brain congestion and delirium. The feet, on the other hand, should be kept warm and dry throughout the attack, and at certain stages this may require drying the skin of cold sweat as also the application of hot mustard packs or of dry heat.

A Clean Intestinal Tract Important

The bowels should be thoroughly evacuated as soon as possible after the onset of the disease and kept open daily thereafter. There is an old Swedish maxim which makes a good rule for health, and we should try to establish it in every case we treat: "Keep the head cool, the bowels open, and the chest and feet warm." We see violations of this on the street every day. A mild laxative is often all that is required.

But many of these patients are bilious and constipated at the onset, which is one reason, I believe, why the ubiquitous pneumococcus and other organisms as causes or factors become suddenly active, with pneumonia as a result. In such cases, there is nothing better than small doses of calomel and podophyllin half hourly, followed by a laxative saline and this to be repeated until the bowels are thoroughly cleared. I think this should be followed in every case by an intestinal antiseptic, of which I prefer the sulphocarbates or arsenite of copper, given every two of three hours; for, today we believe pneumonia is, or becomes, a systemic toxemia as well as a local infection and congestion of a lung area.

No one claims that we can sterilize the alimentary tract, but the proper use of intestinal antiseptics pushed to effect, as indicated by stools no more offensive or less so than in health, we can render the bowels as sterile as in health. If this matter of alimentary toilet is neglected, no inconsiderable

part of the increment of fever comes from autoinfection. Furthermore, we may avoid the later symptoms of tympanites so prone to supervene in severe cases of pneumonia, causing dangerous pressure upon the heart and lungs. When flatulence does occur, I have found a laxative, followed by intestinal antiseptics combined with asafetida, to give relief. At other times an enema or a rectal tube left in the rectum relieves it.

Pleurisy as a Complication

Pleurisy is one of the most distressing symptoms to treat. In some cases the affected area of lung is centrally located, so that there may be little pain. But in the majority of cases there is considerable pleurisy, and when you get a pleuropneumonia with extensive involvement of pleura, you have a most agonizing condition to face, and it will tax any physician's ability to relieve it.

I believe the patients most likely to suffer intensely from pleurisy are those who give a history of previous recurrent attacks of primary or idiopathic pleurisy unassociated with pneumonia. I believe also that the patient who suffers severe and prolonged pleurisy that baffles treatment is the very patient who will be most likely to have an effusion that may be absorbed or become an empyema.

There is no one thing to do as a local measure that will stop or even mitigate the pain of pleurisy in all cases. Drycupping over the painful area sometimes gives magical relief. In others, oil of gaultheria or mustard relieves the pain. And various proprietary and other counterirritants may relieve or utterly fail. Perhaps the reason may be that in some cases we are dealing with a pleurodynia and in others with an inflamed pleura.

But there is no one measure that will give more comfort in pleurisy and elicit the gratitude of the sufferer than to splint the affected side with adhesive straps; beginning at the spine on the well margin and continuing around the affected side, stopping at the sternum on the well margin. But they must be pulled tight. I apply the strips as low down on the thorax as possible, covering the seat of pain, and leave as much affected surface above as possible for counterirritants. I admit that splinting with adhesive plaster conflicts with the use of irritants where most needed. But these may be used first, being careful not to blister the skin; or the painful area may be drycupped.

It should always be remembered that

zinc-oxide adhesive plaster can be removed without annoying the patient in the least by wetting the line of cleavage between skin and plaster with gasolin. Above the plaster I rub into the chest two or three times a day oil of mustard in camphorated oil or iodine in petrogen. The latter may be covered with a thin compress and stork sheeting.

Some Internal Measures for Pain-Relief

Internally, codeine or heroin, to sedate the pain and allay painful excessive cough, should be first tried, as they do not constipate the bowels as does morphine. But, when the pain is severe and agonizing, morphine in small doses, always hypodermically, should not be withheld. The resulting constipation must be promptly overcome. As a rule, the pleurisy pain subsides after a day or two and the morphine may be stopped.

It may not be orthodox for a regular, but I always give bryonia in some form, an active tincture or bryonin, hourly, to every patient I am called to treat. It not only sedates the pain, local and general, but, I believe, promotes absorption of pleural exudates. Furthermore, bryonia acts upon the bowels and thus counteracts the constipating effect of opiates. In fact, care must be exercised, for bryonia, given too long and in too large doses, may set up catharsis that will over-deplete and weaken the patient.

Management of the Fever

There is a difference of opinion today in regard to the fever in pneumonia. Some writers contend that the fever runs a short course and is beneficial rather than harmful. Elsner, one of the latest to profess this belief, writes as follows:

"The fever is one of nature's provisions to destroy the pneumococcus—and is an expression of the virulence of the toxemia." And, further, he says: "The pneumococcus can not long thrive in the temperature of 104° F." A little later, in the same paragraph, he says: "Fever persistently above 104° to 106° F. demands attention both in children and in adults."

I should say that it does! But the sole and only measure Elsner recommends to combat the high temperature above 104 degrees is hydrotherapy. Good, so far as it goes.

Just as long as such inconsistent "rot" is put up to the profession and swallowed at \$25.00 per set, just so long will pneumonia be a self-limited or a grave-limited disease; and did the public know what we preach

they would save themselves the expense of our vigilance at the bedside.

Now, if the pneumococcus "can not long thrive in a temperature of 104° F." and most pneumonics run a temperature of 104 degrees, then, why should we ever have a temperature of 105 and 106 degrees? And, if it is high temperature that cures pneumonia, then, why should we get panicky over a temperature of 106 degrees and begin hydrotherapy? It would look as though 106° F. ought to cremate the last pneumococcus and allow the victim to proceed in peace.

Again, he says: "The temperature is an index of the 'virulence of the toxemia.'" Very well, so it is. But what sane reason for going after a fever above 104° F. while doing nothing when it is under 104?

Another View of Fevers

There are others who take a different view of the fever. Dr. J. M. French says: "Fever is a source of danger in itself—and is an indication of the severity of the infection, and if it can be kept at a reasonable point, the danger is greatly lessened." While he had reference to typhoid fever in particular, he holds this for all fevers, and teaches it is rational to try to abort or modify all fevers by some means. And today we find others, like Butler, Shaller, and Candler, whose writings are full of this same teaching.

This brings up the question of aborting pneumonia before the stage of consolidation and modifying the symptoms in the later stages, thus aiding nature in an early resolution. De Wolfe, in *The Medical Council*, says sodium salicylate, if given within twenty-four hours after the chill, sometimes will abort the attack. And I knew a physician who gave his pneumonia cases little treatment other than sodium salicylate, claiming they run a milder and shorter course. And, why not, since it is antipyretic and both an intestinal and systemic antiseptic?

In this connection, I wish to mention briefly that, while I was a hospital interne, we had a patient who developed pneumonia after an operation. The nurses worked faithfully to keep the fever down by bathing. Finally I was told the temperature was 106° F. and bathing would not reduce it. The assistant surgeon, Doctor Hull, was sent to aid me, who said he knew a remedy that would sweat him and reduce his fever. He said he got it from a notorious Chicago quack, whose name he would not mention. He ordered 20 drops of pure oil of gaultheria

in capsules, to be repeated in two hours, and the dose reduced or omitted as the fever declined. That evening and night the fever fell under profuse sweating, and recovery was prompt. Nor could I see that there was any undue depression.

The patient received a little strychnine during the crisis. It was the fifth day and it possibly would have occurred anyway. But, *do we know* that it would? And with a temperature of 106° F., unaffected by hydrotherapy, would watchful waiting have been justified? And is it justified with even a lower temperature?

I digress to say that I have often resorted to pure oil of gaultheria to reduce high fever from various causes and never saw it do harm, having given it to small infants with hyperpyrexia from bowel toxemia.

The Abortion of Pneumonia

Over ten years ago I heard a discussion of pneumonia by one of my professors before a medical society. Then a physician of the city threw a challenge into that society, that, with aconite, digitalis, and veratrum, he had for years aborted pneumonia if seen early, and modified the disease, inducing an early resolution when developed. I heard something that night that I never heard in my medical course. But the poor fellow stood all alone, just as Harvey and others have had to do. One after another, those professors and eminent medical lights in the city got up and paid their respects to him. Yet, I have been giving aconite and veratrum in fevers and pneumonia more or less ever since.

And, really, was it anything so very new I heard, or that we hear today from the camp of the active-principle therapeutists?

Years ago that great clinician and therapist, Bartholow, wrote of aconite thus: "It lessens the pulse rate, lowers arterial tension, diminishes abnormal heat; it, therefore, antagonizes that condition of the organism known as fever."

Later he says: "The author's observations entitled him to speak with confidence of the good effects of this remedy in fibrinous pneumonia. It is more especially serviceable before exudations have taken place, but is not without utility at any stage, provided the inflammatory process continues. It not only abates the symptoms, but it favors the removal of products of inflammation, by increasing elimination through the skin and kidneys. The use of aconite is not incompatible with other measures which may be needed; but, generally, in fibrinous pneu-

monia, aconite is sufficient up to the period of crisis."

But there are those who say these depressants of the circulation cause heart failure in the crisis. Used judiciously and properly guarded, I don't believe it. You must decide at the beginning whether the case is sthenic or asthenic. If the latter, digitalis and strychnine in small tonic doses should be combined with aconite. If sthenic, then veratrum may be combined with aconite and digitalis for a short time. Doctor Shaller says that he gives small tonic doses of digitalin and strychnine from the beginning in every case; and says that after hepatization sets in aconite should not be given without these tonics; and sweating is an indication to stop aconite or reduce the dose, other remedies being needed.

Doctor Bridges says: "I still regard pneumonia as a self-limited disease (he believed that when I was in school), but believe there are abortive cases terminating before the stage of consolidation occurs. I am not certain that any treatment can accomplish this. There is no way of proving that a case would not have stopped short of consolidation even if the remedies relied upon had been withheld. The argument against the abortive treatment is, that any treatment so considered would fail probably in more than 75 percent of cases."

If, as Bridges concedes, there are abortive cases, then it is worth while to try to abort or shorten the course of others. Whenever a case aborts or is spontaneously cut short, for some reason the equilibrium of the circulation is established, the pulse slows down and the fever falls. And, as said before, there are those who claim to be able to aid nature to do this; and it will hardly do to say that all the men from Bartholow down to the present galaxy of men who positively make these claims are incompetent and dishonest diagnosticians and clinicians.

Personally, I believe that in my own limited practice I have aborted cases that would have been lobar pneumonia of the classical type, and have modified the course of others by an early crisis—a thing always desirable. But I can not prove it; yet, neither can anyone else disprove my assertion. And, if we fail to do either, what harm have we done? We have equalized the circulation, slowed the pulse and lowered the tension; for which the patient is grateful. And, by stimulating the vagus inhibitory center, thus relaxing the vasomotors, we have called a halt upon an overworking heart.

It is overwork that causes cardiac dilatation and heart failure.

The Fever, and Cardiac Exhaustion

You all know that as the temperature rises the pulse and the respiration mount with the fever in its upward course, and a vicious circle is established that does not tend to correct itself. As before pointed out, the temperature being an index of the degree of infection and toxemia, is it common sense to allow the heart to fly like a shuttle and whip it up, as the fashion is, with strychnine, digitalis, and whisky and in that manner overwork it to the degree of exhaustion, dilatation, and death; also by inducing rapid circulation, generalizing the toxemia, which in turn, acting on the heat-centers, increases the fever, and so more quickly overpowers the patient? The more hot toxemic blood is pumped around the system, the higher the fever goes. Apply a law of mechanics. You can't heat a building by means of hot water unless you circulate the water, and the more it circulates, the hotter the building will become.

Locally, a little toxic material enters the blood, paralyzes the inhibitors, accelerates the pulse, the temperature rises, and, so, the vicious circle is established. It is my opinion that uncontrolled high fever is a considerable cause of the heart failure, because you always find a rapid, overworked heart with high fever.

Equalizing the two Circulations and Relieving the Head

Doctor Fennell, in *The Journal of the American Medical Association*, points out the fact that there are two circulations to be considered in pneumonia, and it is the right heart that fails; in which condition the pressure in the systemic circulation may be greatly decreased, so that the radial pulse is almost imperceptible, while coincidentally the pressure in the pulmonary system is so markedly increased that it causes dilatation of the right ventricle. In this condition, the patient will be cyanotic. And then Fennell says: "Would it be wise to increase the systemic blood pressure by giving digitalis and strychnine? Better give nothing." He advises to equalize the pressure of the two systems by "placing the patient in the semi-recumbent position and flushing the capillaries with glonoin and atropine, assisted by a mustard hot-pack; thus giving the heart the only chance to reassert itself."

In this connection, I wish to call attention to sparteine sulphate as a heart tonic in

pneumonia. Over a year ago Dr. George E. Pettey, of Memphis, Tennessee, in two masterly articles in *CLINICAL MEDICINE*, gave us the therapy of sparteine. He points out that it must be used in 1 1-2- to 2-grain doses, by mouth or hypodermically, every two to six hours, instead of in 1-10- to 1-4-grain doses, as the textbooks advise. He shows by sphygmographic tracings that sparteine combines the therapeutic virtues of digitalis and veratrum without their objections of high pressure and nausea.

He cites a case of pneumonia, with right-heart failure, where digitalis, strychnine, and whisky had been administered without effect, while death was imminent. Sparteine sulphate in 2-grain doses was then given every two hours hypodermically, followed by prompt relief and eventual recovery. In a personal letter, Doctor Pettey tells me that he has been using sparteine for thirteen years and finds it so superior to digitalis that he depends entirely upon the former.

Since reading these articles by Pettey, I have given sparteine in several cases where I was dissatisfied with the usual tonics, and I find that it slows the pulse without raising the pressure, giving a full compressible pulse. Let me report this case briefly.

A woman about 40 years old, asthenic, suffered from grip for three or four days, for which she took home treatment. Grip is a first-rate precursor for weak heart in pneumonia. Then one morning she was taken with a severe chill, pleurisy, and cough. A few hours later, she had a pulse of 120 and a temperature of 103.6° F. and fine rales were heard in the lower left lobe. I applied adhesive strips and hot applications, gave her a laxative, and also granules containing aconitine, digitalin and strychnine, one to be taken every hour. I also prescribed a mixture of gelsemium and bryonia, to be taken a teaspoonful every hour. I received a message the next morning, saying that she was much better; nevertheless I went out to see.

I found the pleurisy virtually gone, while the temperature early in the morning had receded to normal; but at this time she had a slight chill. I believe that this pseudo crisis was a near-abortion of the disease. She had sweat during the falling of the fever and as she improved, the family retired (there was no nurse). This occurrence may account for the second light chill she experienced, incident to the room getting cool, as usual, early in the morning and insufficient covering after the high fever and sweating.

Had this been an extension of the pneumonia process, I should have expected a recurrence and extension of the pleurisy; but there was neither, and I should not have expected an early complete crisis at the end of the fourth day from the initial chill.

On this, the second day, at the time of my visit, the patient's temperature was rising, then being 100°, and it reached 104° F. that day. There was now a rusty streaking of the sputum and beginning consolidation. The treatment of the first day was continued, but I added creosotal, 7 1-2 grains, and nuclein, 4 drops every three hours; the latter with the idea of increasing leukocytosis. I also ordered more laxative and the sulphocarbolates, and advised plenty of salt in liquid diet; for, in high fevers—pneumonia especially—the chlorides are rapidly eliminated from the system.

The microscope revealed the presence of streptococci and pneumococci in the sputum. The third morning, the temperature was at 104° F., respirations were 40 and over; the pulse, 130, and higher upon exertion or coughing. At this point, as I was convinced that she had a severe infection, I decided to give strepto-pneumo bacterin. Elsner recommends very highly the bacterin or serum in conjunction with injections of quinine and urea hydrochloride. And I thought that, if the bacterin did not favorably influence the pneumonia, it might at least be prophylactic against empyema—of which I have no ordinary dread.

Bacterins Used and Sparteine Added

I gave 75 million of the cocci, one-half of the smallest dose in the package. Soon she complained of dizziness, and her pulse was more rapid. I did not think a hypodermic of digitalin indicated, as the tension already was high. Consequently I gave 1 1-2-grains of sparteine sulphate hypodermically instead. Within a half hour the pulse came down to 120 and was more full and compressible, and she spoke of feeling better. I ordered 2 grains more in two hours to be taken by mouth, and repeated every two to six hours thereafter, according to the rapidity of the pulse.

The pulse lowered and the fever declined that night, under sweating, and it reached normal the following morning—twenty hours after giving the serum and beginning the sparteine sulphate. And there was complete crisis and prompt resolution. The pulse was 84 at my visit, but the temperature was subnormal and the patient was sweating.

She had been delirious one night during the fever, but was perfectly rational during the crisis.

I do not know that it was necessary to stop the sparteine at this point, because of the free diuresis, leaking skin and lowered pressure, with the pulse only 84 and fairly good. Still, from my experience with sparteine, I decided to give strychnine and digitalin with atropine hypodermically, instead. At the same time I ordered the patient dried of sweat, and kept so; also dry heat to the feet. I neglected to say that when the sparteine was begun the before-mentioned granule was stopped. There never was any more fever, but the pulse rose again to 120 and sometimes more. There also was high blood pressure, which I could not account for.

The following day I returned to sparteine in the place of the digitalin, resulting in a lowering of the pulse and of blood pressure. But the next morning, although in good condition otherwise, the patient was delirious again. As she had become perfectly rational, on the morning of the "crisis," under the full physiological action of sparteine, after her previous fever-delirium, I could not assume the sparteine to be the cause of this phenomenon. But, as another physician had told me that he had seen it cause delirium, I again stopped the sparteine and instead gave a little digitalis tincture and strychnine. Again the pulse reached 120 by the following day and, while the tension was increased, the pulse was not materially lowered by the digitalis. The delirium, rapid pulse and high tension were maintained for over two weeks.

May Sparteine Cause Delirium?

I addressed a letter to Doctor Pettey, asking him whether he ever had observed delirium to be caused by sparteine. In his reply he says: "I have used sparteine almost constantly for thirteen years and I have never seen it to cause delirium yet. I do not see how it can have such an effect. The cases in which it has occurred would doubtless have been delirious without it. Of course, delirium in pneumonia is quite common when there is high fever, but, as sparteine does not increase blood pressure, I cannot see how it would cause it even in pneumonia."

Later, I got the history that my patient had been in virtually this same delirious state once before, induced by worry and loss of sleep for ten days while she was caring for a typhoid-fever patient, and that she

was treated in a sanitarium for three or four weeks for it. Which lends support to Doctor Pettey's belief that the delirium was merely coincident.

Now, I cannot say whether the crisis would have occurred on the fourth day, in this case, or not, or whether it may be ascribed to the treatment. I do not feel that enough bacterin was given to influence the disease materially. I believe the lowering of the pulse and equalization of the blood pressure were factors in the early crisis.

Empyema and Pleurotomy

Doctor Bridges cautions his readers "to look out for empyema in any case that does not resolve by the eighth day." And he makes a point of especial interest to the general practitioner, well worth noting, in regard to simple pleurotomy. He advises to make a 2-inch incision in the 8th interspace on the left and in the 7th on the right down to the pleura in the postaxillary line. These land-marks are different from those given in most books and, as readily seen, afford free drainage and avoid uphill drainage.

To Promote Expectoration.

In every case of pneumonia, I think, the more material there is expectorated, the better. To assist in this, I give, in all cases, calcidin, combined with emetine or ammonium salts. If the cough tends to stop, sanguinarine nitrate helps to stimulate it.

In conclusion, I maintain that, in the treatment of pneumonia, it is rational to control the pulse and the fever by means of drugs in conjunction with hydrotherapy. I have seen a heart in a mad race beating 120 to 150 per minute, and keeping this up without cessation for three long weeks, finally ending in cardiac dilatation and death, when digitalis, strychnine and whiskey were administered for support, where I believed that aconite or veratrum, combined with the digitalin, to counteract the tension caused by the latter and slow the heart as well, were indicated. Others, however, believed the combination was dangerously depressing. That was the best I knew then, and, with all due deference for the honest opinions of others, I think I was right.

At present, however, I consider sparteine sulphate, in 2-grain doses, the superior drug for slowing the pulse, equalizing the pressure, and saving the heart; and not alone in pneumonia, but in other febrile conditions. It is innocuous, and not cumulative like digitalin, for the reason that it causes free diuresis

and, therefore, assure elimination of the toxins.

I honestly believe that the practice of giving a combination of digitalin, strychnine, and whisky, as it is being used all over the country, without anything to control the high pressure, is a vicious one, in many cases; and that it has "railroaded" many a patient into the Beyond, in our desperate efforts to save him by these measures of last resort, not in pneumonia alone, but no less in surgical shock and other depressed conditions.

Pneumonia is probably the chief cause of death throughout the temperate zone and, therefore, worthy of our best consideration. We may hope that in the near future we shall be able to approach a pneumonia-patient with a specific serum with as much confidence as that with which we now administer diphtheria antitoxin. Until then, however, and even then, there will remain an important place for the rational use of drugs.

My plea is for a re-study of the rational active treatment of pneumonia, as opposed to the expectant treatment.

An Experimental Study of Emetine Hydrochloride*

By M. E. MAUREL, M. D., Paris, France

EDITORIAL NOTE.—There is such intense interest in emetine at the present time that it is hardly necessary to make an apology for the publication of this translation of Doctor Maurel's article. The problem of the pharmacologic action of emetine in the control of hemorrhage is a puzzling one. That it does check bleeding, and apparently more quickly and surely than other remedies, the evidence available seems to prove. But why? Perhaps Maurel has answered the question. You are the jury—we leave the decision to you. Next month we shall present the record of some animal experiments with this drug.

IN FOREIGN countries, during the last eighteen months, and during the last year in France, emetine hydrochloride has been the object of numerous clinical studies.

After Vedder had observed the amebicidal properties of emetine, and Leonard Rogers had applied it to the treatment of dysentery and amebic hepatitis, Chauffard was the first one in France to use it in the same diseases, he in turn being followed by a large number of other physicians, all of whom confirmed the claims made for it. Thus we find that emetine is a specific for both affections caused by the *Entamoeba histolytica*. This is a new field added to those applications which emetine already was known to possess; and the discovery is, indeed, one of real practical importance, particularly so for tropical countries. But Flandin¹ deserves the credit of having employed emetine in hemoptysis; Renon², in hematemesis. Since then other uses have been made of this drug; in fact, Ramond³ used it in the treatment of acute and chronic bronchitis.

During the last year I have counted about thirty papers on the treatment of dysentery, amebic hepatitis, and hemorrhage (and this without at all attempting to discover the total number of articles written), so that these

works have seemed to me to renew the interest in experiments made with emetine about fifteen years ago, and published during the years 1900, 1901, and 1902. It is these latter experimental studies that I wish to recall and present a résumé of them; and this effort appears to me desirable, inasmuch as others who have employed emetine in the treatment of hemorrhage seem to be in doubt as to its mode of action.

I believe that my experience will explain particularly the manner in which emetine acts as a hemostyptic. This, therefore, is one of the points which will make my comments of interest; still, aside from that, the study of emetine has enabled me, as will be seen, to enlarge the question and to approach the more general subject of the mode of action of therapeutic and toxic agents.

My researches regarding emetine are, to my mind, so intimately related to my ideas regarding the general action of therapeutic and toxic agents, largely in conformity with the laws of Claude Bernard, that it is difficult for me to speak about emetine without speaking about these laws at the same time. In fact, this work was undertaken by me to confirm these laws. As it was, my labors eventuated in the most convincing demonstration of those laws, so that the confirmation of Bernard's laws obtained by these experiments

*Translated from an article published in the *Bulletin de l'Académie de Médecine* of March, 1911.

actually has more interest for me than have the clinical applications of emetine, important as I realize these to be.

It is for these reasons that I wish to recall these laws in reviewing my own experience with emetine, and also to add some therapeutic considerations.

Claude Bernard, after having experimented only with curare, sulphocyanide of potassium and strychnine upon rabbits, frogs, crawfishes, and leeches, arrived at these three conclusions:

1. Toxic and medicinal substances exert their action, not upon organs, but upon tissues.

2. Each of these substances has an elective anatomic element.

3. This elective action is true for the different animal series.

It will become plain later on that this was one of the greatest intuitions of the genius of this man. Unfortunately, this illustrious physiologist (probably occupied with other researches) did not return to the discussion of these ideas, so that not only do they remain incomplete, but they have been almost entirely forgotten.

The medical profession at that time was not prepared to understand such a conception of therapy; and, in order to make these laws understood by the medical profession, and accepted by them, it would have been necessary to study them one by one in connection with clinical facts. Claude Bernard had no time to do this; still, he knew enough to suggest and formulate these great principles, which, it seems to me, should dominate a large part of the teachings of pathology and therapy; Bernard left to his successors only the task of interpreting them, perfecting them if need be, and proving their importance.

Laborde⁴ and G. Pouchet⁵ already have made very successful efforts in this direction and for fifteen years I myself have tried to join my efforts with theirs.

The Author's Studies of Bernard's Laws

In 1899, in an endeavor to determine the effect of drugs upon leukocytes, I undertook a line of research in regard to the exact mode of action of different agents on various anatomic elements⁶, and, knowing of the laws formulated by Claude Bernard, I first took up the study of these three laws.

To this end, I chose a therapeutic agent which I understood well, having often used it clinically; namely, ipecac, and I endeavored to find out whether Bernard's laws would be confirmed when applied to this drug. But,

inasmuch as I had to experiment upon animals and administer the drug by hypodermic injection in order to insure absorption, I turned to its most active principle, the alkaloid emetine; moreover, emetine being only slightly soluble in cold water, I chose one of its most soluble salts the hydrochloride.

It was in this way that the experiments which I am about to relate were conducted.

The emetine hydrochloride being chosen to verify the laws of Bernard, I employed in these experiments eels, frogs, pigeons, and rabbits, these to represent fishes, batrachians, birds, and mammals, respectively.

I began by determining the M. L. D. (minimum lethal dose) per kilogram body-weight for each of these animals⁷; then, using systematically first the doses below and then those above the M. L. D., I watched the effect of these doses upon a certain number of anatomic elements, namely, the leukocytes, the erythrocytes, sensory nerves, motor nerves, smooth muscle-fiber, and cardiac fiber. Administering doses smaller than the M. L. D. (that is, the doses to be considered as therapeutic ones), the anatomic elements showed a reaction to the drug in the following order: (1) Smooth (involuntary) muscle-fibers; (2) sensory nerves; (3) motor nerves; (4) striated (voluntary) muscle-fibers; (5) cardiac fibers; (6) leukocytes; (7) erythrocytes.⁸

It was found that the smooth fibers were stimulated; the functioning of the sensory nerves, motor nerves, and striated fibers was diminished; that of the cardiac fibers was rather increased. As to the leukocytes and erythrocytes, the therapeutic doses seemed to be without effect.

Bernard's Laws Confirmed with Emetine

Thus, the assertions of Bernard were confirmed, at least along broad lines; for, the experiments demonstrated that

1. Emetine acts upon anatomic elements.

2. Its action is elective with reference to the smooth fibers, which it contracts.

3. This elective action is a fact at least for the vertebrates.

It is true that this selective influence is not exclusive, as Bernard seemed to believe. *Emetine acts, not only upon smooth muscle-fibers, but also, in larger doses, upon other anatomic elements.* But, if for the expression "exclusive selective action" we substitute "the order of sensitiveness," the laws of Bernard remain true.

Administering now doses higher than the M. L. D. (that is, toxic doses), I found another fact not covered by Bernard's laws; namely,

that the order in which these anatomic elements lose their functions is not the same as that in which they are acted upon by a therapeutic dose. Emetine produces an order of toxicity different from the order of sensitiveness mentioned above. The anatomic elements examined after administration of a toxic dose lost their functions in the following order: (1) Sensory nerves; (2) motor nerves; (3) striated fibers; (4) cardiac fibers; (5) smooth fibers; (6) leukocytes; (7) erythrocytes.

The motor nerves and the striated fibers were affected very soon after the sensory nerves, while the cardiac fibers were affected much later.

In the eel, the frog, and even in the pigeon and the rabbit, giving doses a little above the M. L. D., the heart still was seen to beat from ten to twenty minutes after all the reflexes were abolished and the striated muscles had been completely and definitely relaxed.

And again this order remains the same for all animals observed.

Under the influence of the toxic dose, the sensory nerves are the first ones to lose their function, while the smooth fibers, which are the first to react to a therapeutic dose, do not lose their function before doses have been given which have already checked the function of the cardiac fibers.

This means a supplementation of the laws of Bernard, but it does not change the general meaning of them, because there are other agents, such as heat, cold, lead, and the like, which produce an order of sensitiveness different from that following toxic action.

As can be seen, the experiments with emetine confirmed, in their essentials, as nearly as could be hoped, the three laws of Bernard; to wit:

1. Emetine acts upon anatomic elements.

2. Emetine exerts a selective therapeutic as well as toxic action upon these elements.

3. The orders of reaction are the same, at least as regards the vertebrates.

This was for me a great satisfaction, and so much the more, because the importance of confirming these laws at that time, as well as today, exceeded by far the importance of the physiologic study of ipecac and its alkaloid.

Of course, I also was glad to have been able to prove experimentally, to my own eyes, with emetine, the different properties which ipecac was known to possess clinically. I had thereby penetrated the intimate mode of action of this latter drug; and had seen it, owing to its emetine, stop hemorrhages, and con-

trol congestion, inflammation, and other like processes. But all this referred to only one therapeutic agent, while a confirmation of Bernard's laws necessarily would have to embrace them all.

However, I did not let matters rest there; but following the same methods, I studied, from the same standpoint, ergotin (Bonjean), bichloride of mercury, acetate of lead, digitalin, strophanthin, and several other drugs, and always with similar results. So it was that since the year 1900⁹ I have been able to confirm the correctness of the laws of Bernard; I could even sum them up in one single law; to wit:

Bernard's Three Laws Consolidated Into One

For each therapeutic or toxic agent, the anatomic elements acted upon fall into a certain order—that is, the elements are affected successively in a definite order—as to sensitiveness and poisoning, this remaining the same for all vertebrates.

Researches in this direction conducted since that time with some twenty therapeutic or toxic agents, as also subsequent clinical observations, only have served to confirm my convictions on these two points.

Experiments Prove for Emetine What Clinicians Claim for Ipecac

These long-continued investigations, made to determine the order of sensitiveness and toxication, have enabled me to recognize experimentally that emetine possesses practically all the properties which the clinician has already known in ipecac, although with a few modifications.

We know that ipecac is an emetic, and that given in fractional doses it is almost sure to prove purgative. It is equally effective in hemorrhages. In my hands as well as in those of numerous other physicians, it has stood its test as a decongestant and, to a certain extent, as an antiphlogistic, and it has proven, although in a less marked way, defervescent; moreover, in one case, where general anesthetics were lacking, it was very useful in diminishing sensibility, in reducing hernia; it has also proven of great value as a muscle relaxor in luxations and fractures. Finally, ipecac is contraindicated in pregnancy, since it may act as an abortive.

My experiments with emetine hydrochloride not only have shown that this alkaloid possesses most of the properties enumerated, but, moreover, they have enabled me to understand its intimate mechanism so well that, when I have found differences in the action

of ipecac and that of its chief alkaloid (emetine), my experiments have always explained them.

Just How Ipecac and Emetine Act

All the properties of emetine so closely related to those of ipecac explain themselves, as we shall see, by their order of sensitiveness and toxication.

The selective element of the therapeutic dose is, as I have stated, the smooth (involuntary) muscle-fiber, which the emetine contracts.

Thus, in my experiments, I have observed every time after an injection of emetine that the vessels, after a short vasodilation, contracted strongly, and that this vasoconstriction lasted a long time, to such an extent that the small vessels became almost impermeable. Is this not the most striking demonstration of the hemostatic property, long known to be possessed by ipecac, and recently shown for emetine?

Emetine stops hemorrhages by contracting the smooth fibers in the vessels. There can be no other explanation. It is also by its action on the smooth fibers that emetine, as well as ipecac, contracts the dilated vessels in congestion and inflammation.

I have been able to confirm this action under the microscope, and I have repeated this experiment several times, because I find it so striking.¹⁰ Under the influence of emetine, one sees the dilated vessels contract, and the circulation, which had ceased, begins again in a few minutes.

I think, therefore, that emetine can be depended upon in congestions and inflammations of every kind in which ipecac already has been employed successfully. I wish to add that I have used ipecac successfully during more than thirty years in dysentery,* enteritis, gastritis, congestion of the liver, biliousness, bronchitis (simple and capillary), bronchopneumonia, pneumonia, pulmonary emphysema, and so on. In all these diseases, I am convinced that emetine renders the same service as ipecac, with the added advantage that its emetic property is far less pronounced than that of the latter.

Does not this contracting effect upon the entire vascular system explain the decrease of temperature under its influence? Is it not thus that the chilling which precedes vomiting should be understood?

*Although the principal action of emetine in amebic dysentery is due to its amebicidal action, I think that in this disease it acts also in an effectual way as a decongestant and anti-phlogistic; at least, this is the case in bacillary dysentery, which is beneficially influenced by ipecac, in spite of the fact that this drug does not seem to act upon the *Shiga bacillus*.

But it is also because of its action on the smooth fibers, that I believe, *emetine should be avoided in pregnancy*. I fear, that like large doses of ipecac, it provokes uterine contractions, particularly in the pregnant uterus.

Thus, emetine by its action upon the smooth fibers, when given in therapeutic doses, is hemostatic, decongestant, anti-phlogistic, and slightly defervescent; besides, perhaps, abortifacient.

But, furthermore, the experiments with toxic doses have shown, as I have said, that, under their influence it is the sensory nerves which become the selective anatomic element, and that the reaction on the motor nerves and striated fibers follows very closely that of the sensory nerves. These three elements lose their functions almost at the same time.

Some of the Properties of Emetine Analyzed

In 1901¹¹ I made the statement that emetine injections produce local anesthesia. Does not this selective influence of the toxic dose explain quite naturally this anesthetic action? Is it not owing to this same action upon the sensory nerves that ipecac is expected to diminish sensibility and thereby facilitate the reduction of a hernia?

Finally, knowing that the striated fibers lose their function, as a result of the same dose which acts upon the sensory nerves, can we not in this way explain the muscular relaxation which we expect ipecac to produce in facilitating the correction of luxations and fractures?

The action of toxic doses of emetine upon the sensory nerves, the motor nerves, and the striated fibers explains its anesthetic property and its power to produce muscular relaxation.

For the reason here named, I am convinced that the clinician can expect the same results from emetine as from ipecac.

Concerning the emetic and purgative actions, it seems to me difficult to identify the physiologic effect of ipecac with that of emetine. Owing to its action upon the smooth fibers, the emetine constituent surely plays a role in producing vomiting; but, as it acts only slightly on the striated fiber (a concurrent condition indispensable for the act of vomiting), it is probable that ipecac contains a substance which acts particularly upon the striated fiber; and it must be this substance operating in conjunction with emetine that makes ipecac such an energetic emetic.

The same is true for the purgative action of ipecac. Emetine, of necessity, must also

in this case interfere by its action on the smooth fibers of the intestine; but ipecac must, moreover, contain a substance with a special action on the secretive organs and the digestive apparatus.

[Doctor Maurel makes no reference to cephaeline, the most powerful emetic alkaloid of ipecac. A study of this substance, along the lines suggested in this paper, would be interesting.—ED.]

As seen from these experiments (published in 1900 to 1902), the properties of emetine, as employed therapeutically, appear already to be numerous and important.

Vedder and, later, Rogers (Calcutta) have of late added another not less important one; namely, its action upon the *Entamoeba histolytica*.

This is a fact of the greatest importance; first, because of its unfailing action, and, secondly, because of the increase in frequency of ameboid dysentery and abscess of the liver in our colonies. But, important as this may be, it is evident that this specific action refers only to affections caused by amebas; albeit, through its action in other diseases, emetine will be of value in daily practice¹².

A Summing-Up

In summing up the results of my experiments with emetine hydrochloride, I arrive at the following conclusions:

1. The experiments have proven that this alkaloid, given in therapeutic doses, has the same hemostatic, decongestant, anti-phlogistic, defervescent and perhaps abortifacient actions as physicians have known ipecac to possess.

2. It has also been shown that by increasing the dose of emetine the sensibility is diminished and muscular relaxation produced.

3. The experiments have also proven that the emetic and purgative action of ipecac are partly attributable to emetine, but that therapeutic doses of emetine probably are not sufficient for both of these effects.

4. It is an important fact that my experiments have shown that all these properties of emetine explain themselves fully by its action on anatomic elements, principally those upon which it has a selective influence.

5. Finally—and this is the point which in my opinion deserves the most attention—

my experiments have completely confirmed the laws of Claude Bernard, which, it appears, should henceforth guide all research concerning the action of therapeutic and toxic agents.

In closing, I wish to repeat these laws:

1. The therapeutic and toxic agents act, not on organs, but on anatomic elements.

2. Each agent has a selective influence upon one of these anatomic elements.

3. This selective action is always the same, at least in the order of vertebrates.

I should greatly appreciate it if the remarks of mine regarding the laws of Claude Bernard would encourage some of the research-workers to take them as a guide.

I am firmly convinced that they alone bring us to a true understanding of the intimate mode of action of the therapeutic and toxic agents. Thus, I assume that it is more interesting to know the mode of action of the older remedies than it is to discover new ones, without knowing their mode of action. Such discoveries lead us into empiricism. May my plea be heard!

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Diseases of the Alimentary Canal

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EDITORIAL NOTE.—This is the fourth paper in Doctor Benedict's series dealing with the diseases of the alimentary canal. We are sure that every reader of "Clinical Medicine" will be pleased to learn that this series will be continued for several months. Gastric disorders are always troublesome—difficult to diagnose correctly; not easy to treat successfully. In order that every reader may apply in the best way possible the principles laid down in these articles, we invite everyone to "fire in" the questions he wants answered.

IV. ACHYLIA GASTRICA

IN THIS condition, no gastric juice, in the digestive sense, is secreted at all. Not only is free hydrochloric acid entirely lacking, but combined hydrochloric acid as well. The peptone test is negative, milk is not coagulated; upon mixing equal parts of gastric filtrate and 60 per cent decinormal hydrochloric acid to make a solution of 30 per cent decinormal, of full physiologic strength, coagulated egg-albumen is not digested. As a rule, in spite of the apparent tendency toward fermentation, the total acidity is low, that is, 3 to 10 per cent decinormal, instead of 50 to 75 per cent, the normal proportion.

Here may be mentioned a peculiar reaction, observed in every case since its first discovery, and which will explain why nothing has been said thus far about the alizarin reaction for measuring combined hydrochloric acid. Upon adding alizarin to the filtrate, the end reaction occurs immediately. As commonly stated, alizarin determines the end point of fermentation acids, beyond the free hydrochloric acid acidity, which is measured by dimethyl-amidoazobenzol. Generally, the alizarin end point occurs a few degrees beyond the straw-yellow end point seen with dimethyl. Everything beyond the alizarin end point, and up to the end point for total acidity shown by phenolphthalein, is supposed to be combined hydrochloric acid. If this were so, the entire acidity in achylia would consist of hydrochloric acid in organic combination; which is an obvious absurdity. For this reason, the writer believes that it is best to discard alizarin altogether or to experiment with it simply as a matter of amusement.

A transient and manifestly functional achylia may occur in asthma, nervous shock, surgical shock, acute fevers, chilling of the body, and so on. Chronic achylia, both of the gastric and of other digestive glands, as indicated in the feces, by an almost complete failure of digestion, occurs in Addison's disease, late in cancer (especially of the stomach, though not universally), in conditions of atrophy of

the mucosa of the stomach constituting the ultimate stage of chronic gastritis.

It is also occasionally encountered accidentally in series of students volunteering for digestive experiments and in persons with some temporary digestive condition leading to examination. Such persons generally maintain good health; the achylia does not disappear, but the patient does, so that it is practically impossible to collect observations to decide the question as to whether this form of achylia is functional or attributable to some organic lesion.

Sometimes it is found after hemorrhage from gastric ulcer has ceased; sometimes such cases become cancerous later, or, perhaps it would be better to say, that they may have been already in the undiagnosticable stage of gastric cancer. It may, further, be found in cases of obstinate diarrhea; whether it persists after the diarrhea has been relieved, as by attending to a chronic colitis, or touching up a rectal or sigmoid ulcer through the speculum, is difficult to determine, for the reason that such patients feel a natural repugnance to further experimentation.

Secretory Perversions—Hyperchlorhydria

As a matter of convenience, the subject indicated in the subhead has been left to the last, for the reason that we have one general indication to guide us in bringing the secretions, and especially that of hydrochloric acid, to the normal level. Since hyperchlorhydria implies the paradox of too good digestion, except for some interference with the ptyalin digestion of cooked starch—but which is not absolute, while, moreover, not being very important, because of the pancreatic provision—digestants of all kind are contra-indicated.

In the practical therapeutic sense, or even in that of the laboratory, we hardly can speak of an excess of pepsin and rennet, whether these represent two or a single ferment. From the functional standpoint, hyperchlorhydria always is curable; still, many cases are

persistent and recurrent and suggest an actual organic hypertrophy of certain glandular parts.

Up to a few years ago we could be still more definite and refer to the oxyntic, or parietal cells of the gastric tubules. Recently, some doubt has been cast upon the differentiation into oxyntic and chief cells. There is current an apprehension that the hyperchlorhydric stomach will corrode or, rather, digest itself, thus giving rise to an ulcer. As a matter of fact, gastric ulcer is pretty evenly distributed among hyperchlorhydric hypochlorhydric or achlorhydric and euchlorhydric cases.

Critical consideration of the evidence shows that many of the early statistics on which our conceptions have been based depend upon the diagnosis of excess of acid as shown by qualitative tests or even by tests for total or other degree of acidity not specifically hydrochloric. On the other hand, many physicians, like the writer, feel that, however desirable it may be to know the state of secretion in ulcer, the passage of the tube during the acute stage is too dangerous to be considered.

While hyperchlorhydria is a troublesome and even a serious condition, the writer does not remember ever having had a case that subsequently developed into either gastric or duodenal ulcer. Thus, our treatment need not be materially influenced by the fear of an impending ulcer and hemorrhage, but we may treat the condition on its own account.

We can make bricks without straw, but not without clay or shale. The stomach cannot elaborate hydrochloric acid without some chloride, and the only chloride present in the system in amounts to be considered in this connection is the chloride of sodium. Thus, theoretically, hyperchlorhydria may be cured in the immediate sense although not with reference to the tendency, to recurrence, merely by establishing a salt-free diet. Practically, such a diet should be made part of the treatment, but alone it is unsatisfactory, because it is difficult to do more than eliminate free salt from the diet, and, if the patient is eating at hotels, restaurants, and boarding houses, or even at a home where intelligence and appreciation of his needs are lacking, we cannot even eliminate the salt used in cooking. Even if we construct a diet from which meat is lacking or which contains only thoroughly washed meat (virtually soup-meat), and which includes only foods having a negligible amount of salt, yet, the system may retain a considerable amount and utilize the chlorine over and over again. Conse-

quently, we not only must exclude salt from the diet as nearly completely as possible, but must discourage hydrochloric acid secretion and neutralize any excess.

As has been scientifically demonstrated by Pawlow (but well understood as a matter of logic and clinical and even physiologic experience long before his time), a diet which does not require a given digestive secretion tends to working its cessation. Hence, the food should contain a minimum of proteid and as much fat, starch, and sugar as possible. It should be distinctly understood that such a diet acts gradually; any sudden and unwise attempt to counteract hyperchlorhydria by an excess of oil dressings, candy, or the like, may precipitate an attack. Condiments, tasty foods, tasty methods of cooking (such as frying) should also be avoided. Vinegar or any other acid food adjuvant obviously supplements the acidity. Even buttermilk often has an acidity of 100 percent decinormal.

Inasmuch as the immediate secretion of an excess of hydrochloric acid is largely reflex, all forms of anxiety, vexation, and other strong emotions should be avoided. For example, there may be cited an attack, in a physician, brought on by the fear of further trouble while riding in the rain over a state road paved secundum artem with flint chips, after one previous blowout.

Almost any drug acting as a local anesthetic, whether so classified or as a mydriatic, may be employed to diminish excessive acid secretion; but most patients entertain an objection to cocaine and opiates, on account of the danger of habit formation, and to mydriatics, because of the interference with the use of the eyes and danger of ocular disease. Anesthesin, orthoform, and cannabis indica remain, then, as the best drugs to discourage such excess of secretion. Bismuth subcarbonate is slightly antacid, but more valuable to soothe and protect the mucosa; while other of its salts, as the subgallate, may be resorted to. Pure mineral oil (purpetrol) with camphor dissolved in it, and, if desired, with the bismuth salt incorporated, will be found useful.

For practical purposes, we have only three direct gastric antacids: magnesium oxide or hydroxide, calcium hydroxide or carbonate, and sodium bicarbonate. The first (and it makes little difference whether the magnesium oxide or milk of magnesia is given) has the advantage of being "still," that is, yielding no carbon dioxide, and of favoring elimination, including that of sodium chloride. However, its laxative action may be too great.

In that case, we naturally turn to lime; only, unfortunately, the hydrate is but slightly soluble (although its solubility is increased by means of saccharine solutions—saccharate of lime). Chalk may be used, although this, like sodium bicarbonate, produces effervescence. This effervescence undoubtedly titillates the stomach into secreting more acid; yet, the writer is becoming more and more skeptic about the practical harm of this action, while in cases in which magnesium compounds produce too great catharsis or in those in which the actual amount of acid is great, sodium bicarbonate must be used. We may get an idea of the dose by administering a teaspoonful of it in saturated solution and listening to the effervescence, repeating the dose as often as effervescence continues to occur. Rarely will more than three teaspoonfuls, or about 15 Grams, be needed.

The prognosis of hyperchlorhydria is almost absolutely favorable so far as immediate results are concerned. The writer has had a case of twenty years' duration considered by the patient as cured in a week—but it is exceedingly improbable that the result was permanent.

On the other hand, the patient may insist that he takes no salt, that none is used in cooking his food, he may be taking full doses of local calmatives and large doses of magnesia, and, yet, yield for weeks highly acid stomach contents—the hydrochloric acid being far in excess of what one can account for chemically and physiologically. Even these cases are bound to succumb to treatment if persisted in.

For all that, the writer is convinced that, barring transient cases, hyperchlorhydria consists in some definite hyperplasia of acid-secreting cells, analogous to the condition in certain forms of exophthalmic goiter (with which it may, indeed, be associated) or else in some underlying nervous condition, functional so far as the secreting glands are concerned, but probably really organic from the standpoint of the innervating apparatus. Hence, hyperchlorhydria is liable to recur, and, while it may be gradually overcome, is likely to last, as a tendency, with intermittent attacks, for years.

Euchlorhydria, in the writer's experience, implies proper formation of the ferment or ferments of the stomach, and, hence, literally, good digestion; except as the latter may be influenced by extrinsic fermentation or by motor abnormalities, either functional or owing to organic obstruction, and the like.

But, the examination of the stomach con-

tents is only one phase of gastric diagnosis. There may be euchlorhydria and, indeed, perfect digestion, in certain stages of very serious organic lesions, such as ulcer, gastritis, cancer, and so on. Also, as already intimated, a patient may complain greatly about his stomach, while yielding normal stomach contents, and still be far from malingering or a neurotic, for he may be suffering from chronic appendicitis, gallstones, movable kidney, chronic colitis, abdominal adhesions or one of various other maladies.

Deficient Acid Secretion

In hypochlorhydria, achlorhydria, and achylia, the indications are, in general, the reverse of those in hyperchlorhydria; the prognosis varying, in a general way, according to the degree of depression of acidity—though, of course, a transient achylia from some form of medical shock, as previously considered, vouchsafes a better prognosis than a persistent hypochlorhydria. In hyperchlorhydria, it obviously is foolish to administer digestants unless, perhaps, some specific or inclusive digestant, to favor starch conversion before the acidity reaches a degree sufficient to inhibit the ptyalin. In deficiency of secretion, it is illogical to administer digestants, except when no hydrochloric acid and, therefore, no mature ferment is present. But, in effect, there are some cases in which the mere administration of hydrochloric acid to activate the ferment or ferments, seems to require some assistance from pepsin, or one of the vegetable multidigestants like papain.

This is a purely empiric opinion, entirely unjustified academically. Such use of pepsin, papain, and the like, is mainly required in cases complicated with marked fermentation and not relieved by attempts to secure aseptic or, rather, asaprophytic ingesta.

It is scarcely necessary to state that the main immediate treatment of hypo- and of achlorhydria is to supply the lacking hydrochloric acid. There are some practical points (which depend upon sound theory) to be remembered. Prescribe the acid when it is physiologically needed; that is, about an hour after eating, letting the stomach exert its own secretory powers first. Give it sufficiently diluted not to cause corrosion or astringency—approximately corresponding to the acidity of good strong lemonade. Order the mouth rinsed after the dose.

The dosage should depend as nearly as possible upon the actual deficit. For instance, the normal strength of gastric juice is 2:1000; of stomach contents, 1:1000. Let

us assume the bulk of an actual meal as 500 Cc., that there is achlorhydria, and that the official dilute hydrochloric acid used is of the proper strength (1:10). We need, therefore, 1-2 gram of the gaseous hydrochloric acid, or 5 Cc. of the official dilute acid. This amount, given at once, would require so much water as to dilute the stomach contents too much. Therefore it is better to give 1 Cc. at a time, every fifteen minutes or so, beginning about three quarters of an hour after the meal. If the titration has shown a hydrochloric acidity of, say, 10 percent decinormal, we may assume that half the above amount of hydrochloric acid is needed, and so on.

As in hyperchlorhydria the indication was, to abate the secretion and to soothe the stomach, so in the group of cases with deficient hydrochloric acid we need to stimulate. Without reducing the carbohydrates unduly or even the fats below a moderate amount, we need proteids, especially meat proteids, salt, condiments, sharp-tasting foods, those with small hard particles, such as nuts and the like. The food should usually be taken hot, not too much diluted with beverages; and (even at the risk of offending orthodox dietetic ideas) it should be, within bounds of reason, what the patient likes. Salt, of course, is indicated as a source of hydrochloric acid, but it should be remembered that it is often actually lacking in the

system and that one cannot cure hypochlorhydria by administering salt, any more than one can cure anemia by giving iron. Moreover, an excess of salt in the stomach tends to inhibit hydrochloric acid secretion.

Special attention should be paid to the treatment of achylia. At the outset, it is well enough to administer hydrochloric acid or acidol, pepsin or papain, and so on, with the hope of developing secretion. Such treatment is like giving nutrient enemata, with the idea of doing the best one can and hoping rather than expecting that good will come of it. In achylia resulting in the ultimate stage of gastritis, in cancer or in connection with marked intestinal complications, it is better, as a rule, to prescribe predigested food, rather than to administer digestants; still, each case must be treated according to individual indications and results.

In the large group of achylia cases in which the subjects are enjoying good general health, it probably is best, after a reasonable attempt to restore gastric function, to let the stomach alone and consider it as merely an antechamber to intestinal digestion.

As to drugs supposed to favor gastric secretion, the writer, while having no special objection to condurango, quassia, aromatics, and so on, or to galenicals of *nux vomica*, is content with strychnine alone, although with no absolute sense of its reliability.

Veratrine: The Alkaloid of *Sabadilla*

Its Action and Applications

By H. HAMILTON REDFIELD, A. B., M. D., Chicago, Illinois

VERATRINE, according to the U. S. Pharmacopeia, is an alkaloid derived from *veratrum sabadilla* (cevadilla), a bulbous plant belonging to the natural order of liliaceae, and indigenous to Mexico and Central America. However, in addition to veratrine, this same plant contains the alkaloids cevadilline, sabadine, sabadinine, and a basic substance known as Wright's veratrine.

In its physiologic action, veratrine closely simulates that of aconitine, being, in maximum doses, an exceedingly powerful depressor of the cardiac apparatus as well as a spinal paralyzer. Its influence upon the respiration is not nearly so marked as is that of aconitine, and it also differs from the latter in being an emetocathartic, paralyzing all the

motor system centrally, and impairing all reflexes, while leaving sensation unimpaired. It exerts little, if any, action as a diuretic or diaphoretic, so far as any direct stimulation of these excretions is concerned, but by relaxing the vessels it opens wide the doors of elimination and so provides for its own escape and for that of all other hemic toxins.

While in large or excessive doses veratrine is productive of marked depression, yet, its use is not fraught with any great degree of danger inasmuch as it seldom proves fatal, because of its producing free purging and vomiting before the excessive depression can become manifest. When death does result from veratrine, it is from paralysis of the heart.

Given in small doses, veratrine produces a diminution in the force of the heart, but it does not at first exert any appreciable effect upon the rate of the pulse. Small doses relax the tension of the arterioles, thus relieving the heart of part of its work. By this, the circulation is facilitated and the nutrition of the heart-muscle and of other tissues is enhanced. Its continued administration in full doses, however, has the effect of causing a decrease in the rate of the pulse, which becomes soft, compressible, and shows a marked tendency to rise upon the slightest effort or exertion on the part of the subject. Muscular weakness becomes marked; also nausea and vomiting occur.

Taken in large doses, the foregoing symptoms are all increased; the pulse becomes exceedingly rapid and is so weak as to be hardly appreciable to the finger; the skin becomes cold and clammy; debility is extreme; vomiting is constant; the patient becomes dizzy; there is impairment of vision; and partial unconsciousness results.

While it has been found that aconitine and veratrine closely resemble each other in their action in a general way, yet, it should not be taken for granted that the one can replace the other or that veratrine can be placed in the same category with aconitine as a febrifuge. While veratrine exerts a powerful influence upon the heart, the same as does aconitine, still, it lacks in power as an equalizer of the circulation—a quality possessed to a marked degree by aconitine—which latter, by its influence over the vaso-motor system, becomes the antipyretic above all others.

The most suitable sphere of action of veratrine, in the acute inflammatory conditions, seems to be as an arterial and cardiac sedative, in which role it justifies itself and gives excellent results.

Therapeutics of Veratrine

From the foregoing, it would follow *a priori* that veratrine would be the indicated remedy whenever the pulse is full, strong, and bounding, showing great arterial tension, excitement or congestion, these symptoms being sometimes coupled with nausea, vomiting, and profuse perspiration.

It should not be forgotten in aneurism, when its depressing action on the circulation is desired.

In cerebral congestions, when the patient complains of a bursting sensation in the head, the cause of these congestions often being traceable to heat, alcohol, vascular irrita-

tion or a condition of plethora, veratrine is of the greatest service.

In the initiatory stages of cerebrospinal fever, when the onset is sudden, the congestion intense, pulse hard, full and bounding, with nausea and vomiting, veratrine should be the remedy of choice.

Fordyce Barker gives veratrine the first place in puerperal fever due to metritis.

It is most effective in the congestive stages of pneumonia, when the pulse indications are the ones so typical of the use of veratrine: hard, full and bounding, with respiration rapid, and the patient is bathed in a copious perspiration.

It should be studied in all acute congestions of the lungs, which are sometimes met with in acute bronchitis and asthma. In these cases, the fever is high, dyspnea extreme, and the pulse is the typical veratrine-pulse.

Diseases of the heart, such as endocarditis and pericarditis, when the arterial tension is high, are benefited by veratrine.

Distress in the cardiac region, with an increased heart action and a full-tension pulse, call for veratrine.

In peritonitis, metritis, ovaritis, with a high-tension pulse, and the temperature running high; also in the convulsions of the puerperal state, when the face is flushed and the blood-vessels of the head and neck are extremely congested, it is the remedy of choice.

In nephritis, hepatitis, cystitis, pleurisy, and tonsillitis, when the arterial tension is high and the congestion marked, veratrine should be studied, as it will give results that are all that can be desired.

It is a very serviceable remedy in cases of exophthalmic goiter, when the action of the heart is strong and the arterial system under great tension, as is usual in the early stages.

The action of veratrine as a reducer of arterial tension makes its indications exceedingly patent, and it should be prescribed in all cases where there is a condition of excitement or congestion of the heart, with a full, strong pulse.

Given in association with aconitine and digitalin, it makes a combination unexcelled in the treatment of the acute inflammatory conditions, when the pulse-indications for veratrine are present. These conditions are seen at the onset of the sthenic fevers, and here the administration of aconitine (gr. 1-128), digitalin (gr. 1-64), and veratrine (gr. 1-128), will bring about an alteration in the condition quicker and more pleasantly than any other combination that can possibly be devised.

In the asthenic fevers, when the opposite pulse-condition exists—for instance, when the pulse is quite soft, slow and compressible—the exclusion of veratrine from the above combination, and its replacement with strychnine arsenate, will prove equally effective to meet the conditions.

In that dread condition, eclampsia, the *bete noir* of all obstetricians, veratrine has been productive of the best results, and many lives have been saved by its use. It is best given hypodermatically, and it should be repeated at short intervals. In these cases, veratrine is best given as follows: Dissolve six granules in a fluidram of water, and inject.

Repeat the dose in fifteen minutes; and continue to full physiological effect.

The more veratrine is studied, the more it will be appreciated; and, once its power over the circulation is realized and understood, it becomes a sheet-anchor to the physician in meeting the conditions so often found in the onset of the acute inflammatory conditions.

Specific Indications

Pulse full and strong, deep-red stripe down the center of the tongue, tissue full, not shrunken, flushed skin, marked arterial throbbing, increased arterial tension, eyes blood-shot, sthenic fevers.

The Bacterin Treatment of Respiratory Catarrh

By MALCOLM DEAN MILLER, M. D., Wollaston, Mass.

IN the issue of this magazine for May, 1914, I published an article dealing with my experiences with bacterins in various infections. Among the letters which I have received from people who read this paper there were two that particularly pleased me.

One of these missives was from a physician living about a hundred miles away. He wrote that he had long been interested in bacterin treatment, but had not cared to undertake any work with bacterins because of the lack of clinical evidence, and particularly because what few clinical papers he had encountered were by men in distant parts of the country. He asked whether I would consent to see him and tell him in greater detail about the cases I had treated. This, naturally, I was extremely glad to do. So, he came and spent a day with me and listened to all I could tell him. Not long afterward, I was surprised to receive from him a bank draft for a substantial sum, which he insisted that I accept as a recompense for his taking up my time.

The second letter was from a layman who, through some library, had got a copy of *CLINICAL MEDICINE*. This gentleman asked whether I had had any experience with the bacterin treatment of chronic nasal catarrh or could indicate whether it would be of benefit in that trouble. As at that moment I myself was undergoing a series of injections and also had a friend under treatment, I replied that I believed it would prove of great benefit, judging from results already obtained

in the two instances, and promised to let him know definitely later.

My Old Chum's Experience

The question of applying bacterins to nasal catarrh was one which first suggested itself to me in March, 1913, when I was visiting in a distant city and came across one of my old chums of the medical school. He and I used to spend all our spare time in the fascinating work of making photomicrographs and I can remember vividly the severe throat infection which he contracted and which at first was thought to be diphtheria. Cultural tests, however, proved the infection to have been acquired from a pure culture of Friedlaender's pneumobacillus, and after several weeks' illness he recovered, apparently completely.

However, the bacilli were not extirpated, and when, after about ten years' separation, I again met my old friend, he presented a pitiful sight. One acute catarrh after another had worn him down; the antrum and the frontal sinuses had become infected, and when I saw him he was having the delirious joy of having a trocar jammed in every few days, to allow drainage, and then having the cavity irrigated and filled with a 50 per cent argyrol solution. Hearing that I was in town, he dragged himself out of bed and came to look me up. He was looking forward with the utmost dread to the next sitting with the nose-man.

Looking back over my friend's history, I told him I believed that the old Friedlaender infection was chiefly responsible and urged him to get a Friedlaender stock bacterin and try it. Together we went to the largest drugstore, which boasted a good line of surgical instruments and other physicians' supplies, and, found a complete line of bacterins in stock. An injection fortunately was given at once; and on the following day when I was leaving my friend declared that he already felt better and had less discharge. The results of subsequent injections were so satisfactory that he threw up his position and went to Boston to devote himself to completing the cure. I must here mention that he did not complete his medical course, but went into business, in which he is earning about twenty times as much as the average doctor. He had some radiographs made of his skull; also, had cultures made, which showed the Friedlaender, streptococci, and staphylococci, and was using an autogenous bacterin intramuscularly when I saw him. He promised to let me know the end-result, but never has reported. However, he had derived very great benefit from the stock Friedlaender—in fact, it seemed to start improvement after the local work had failed to do anything except to cause postoperative depression.

Stock Bacterins Better than Autogenous

Authorities to the contrary notwithstanding, I have never seen such good effects from autogenous as from stock bacterins. I consider an autogenous proper only when a suitable stock is not marketed or cannot be extemporized from stocks on hand, or when the infecting organism is thought to be of a peculiar strain, as was the case in the great septic-sore-throat epidemics in the East some years ago.

I have used autogenous bacterins without perceptible effect, and then, having exhausted the supply, have substituted stocks containing the same organisms and secured at once marked effect, with relief of symptoms and cessation of the pus formation. For these reasons, I began to look around for a suitable stock bacterin.

Examinations of many specimens of nasal discharge convinced me that the ordinary pus cocci, pneumococci, streptococci, and Friedlaender's bacillus are generally found in most cases, though one or more may be missing or absent in the individual case.

There is, however, one good point about bacterins; it seems to do absolutely no harm

to inject immense doses of any germ which does not happen to be taking part actively in a given infection. Shotgun mixtures, then, in bacterins not only are permissible but desirable. The laboratory can make up a mixed bacterin to contain all the germs which are commonly found in a certain type of disease, and it is safer and better to have a few kinds that may not be present in a certain patient than to be short one kind.

After some reading of makers' lists, I selected a bacterin which could be bought in bulk packages and which contained *B. Friedlaender*, 300 million; *M. catarrhalis*, 200 million; pneumococcus (or diplococcus lanceolatus), 80 million; streptococcus, 60 million; staphylococcus, albus and aureus, each 200 million to each cubic centimeter. Subsequently, on account of greater convenience of supply, I have been using 20 Cc. bulk goods of the following composition: staphylococcus, albus and aureus, and diphtheroid (*B. septus*), each 100 million; Friedlaender, pneumococcus, *M. catarrhalis*, and streptococcus, each 50 million per Cc.

My Personal Experience

Appointing my patient to perform the delicate operation of injecting me, I began the treatment with about 0.5 Cc., and increased the dose slightly at each sitting until we were taking upward of 1.5 Cc., at intervals of about ten days. Now, any brother physician who has been afflicted with acute, subacute, and chronic catarrh during the whole of his remembered existence, to say nothing of such slight disorders incident thereto—including adenoids, deflected septum, enlarged turbinates, and spurs (all more or less operated upon except the adenoids, which at this writing are "still with us")—can judge of the delight which dawned upon me when after about 5 injections I noticed a great diminution in the amount of discharge. Instead of keeping a separate handkerchief for receiving nasal discharge at least twenty or thirty times a day in the periods between acute coryzas, I found that I was going sometimes two days without blowing my nose at all! I pushed the dose up to 1.7 Cc., at which point both I and my patient felt a decided chilliness a few hours after the injection, with greatly increased secretion.

After that, we both went on observing for ten days, at the end of which time I developed the most "lovely" and "beautiful" cold I can remember ever having had. I let this go one day, then took an increased dose of my bacterins—about 1.9 Cc.—and the next morning

every symptom had vanished absolutely. At this stage, too, I advised my patient to go under observation. After two weeks, he, too, had a pronounced negative phase, which terminated, as in my own person, by an injection. When he reached 2 Cc., with only a very slight local reaction, I discontinued the injections.

Ups and Downs in My Patient's Case

The duration of immunity, in my patient's case, was only two months, during which time he indulged in all sorts of tests to prove his immunity to exposure, which formerly had infallibly brought on an acute rhinitis. He then came in with an increase of nasal discharge from one nostril, tenderness over the antrum, and symptoms of an oncoming "cold." Examination showed a mucus discharge containing a few pus-cells and pneumococci.

At this time I obtained a point of history which had not previously been elucidated, namely, that there had been a severe and protracted infection of that antrum years ago. I advised his seeing a specialist, but he refused; so, we obtained a straight pneumobacterin and made six injections of that. He then had practically no discharge and no symptoms.

Six months have elapsed and he has had no acute colds—the first summer he can remember to have been so blessed. The mucous membranes throughout the nasal tract are of a healthy color, free from crusts and excessive secretion, vascular congestion, and so on. His general health is correspondingly improved. The singing-voice in this patient has been greatly benefited and the speaking-voice has lost that characteristic catarrhal, woody quality.

My own condition was equally improved. The immunity lasted until December—over seven months. I had no acute colds during the entire summer. Only five days ago, a patient came in with an extremely severe cold and evidently I have picked up the infection from him, my immunity having expired. However, I took a dose of about 0.7 Cc. of the second-named bacterin and aborted the cold successfully, and this has been the story with about a dozen acute cases I have treated during the past summer and fall.

One single injection of 0.5 Cc., or a little more, invariably checks all the acute symptoms within twelve to eighteen hours, and a second is seldom required. In the first acute case in which I tried it, the injection was given on a Monday afternoon, the cold having

started on Friday; the husband of the patient called me Monday noon, as his wife was too sick to hold her head up. She received the bacterin at about 1 o'clock, p. m., and that evening at 8 she called me on the telephone to say that her cold was all gone.

Experience with Other Patients

Having done the experimenting on myself, I undertook last spring to treat chronic nasal catarrh on the basis of a regularly increased dose every five to seven days. I have now discharged well, that is, entirely free from abnormal discharge and the usual symptoms of chronic catarrh, 7 patients. I carried the dose up to 2 Cc., and repeated this dose until it no longer caused any perceptible local reaction. It generally takes from 7 to 12 injections, increasing by about 0.25 Cc. at each sitting, in order to secure this end-result.

One gentleman, 60 years of age, with adenoids and deflected septum, who had suffered every summer with what he called "hay-fever," was cured by 7 injections. After 5 injections, he called me up to say that he now was sleeping all night for the first time in forty years. Before beginning the treatment, he would have to get up and cough out the accumulated droppings which collected until a feeling of suffocation awakened him. His last report, two months after receiving the last dose, was that he still is entirely free from catarrhal symptoms. This man, of course, needs operative treatment, and, I hope, will soon be able to follow my advice and see a specialist; but, at any rate, he has no dropping in the throat, the membranes are in a healthy condition, and he has good breathing-space, compared with the condition existing before treatment.

One of the most instructive things about this particular case was, that only 7 injections were required, the dose having been regularly increased by 0.25 Cc., each time, disregarding somewhat severe local reactions and a marked chill following the fourth and fifth injections. This corresponded to what I observed in my own case; namely, that no great improvement seemed to take place after the first few injections, but as soon as large doses, over 1.25 Cc., were attained, there appeared signs of constitutional reaction and a general negative phase of slight degree, which gave way to a rapid disappearance of symptoms as soon as the next (and larger) dose was administered.

Reviewing the cases discharged and those now under treatment, I should say most emphatically that local and constitutional reactions are not a contraindication to increasing

the dose, allowing a seven-day interval, although it might be advisable to repeat the same dose if five-day intervals were being adopted. I have tried five, seven, and ten days between injections, and believe that, from all points of view, the seven-day interval is most suitable. It may be advisable, in the case of nervous women and timid men, to avoid any marked constitutional reaction, but purely upon grounds of expediency; as already stated, another dose generally carries them into a very strongly marked positive phase.

Consequently, unless special reasons for repeating the same-sized dose are present, adopt the plan of increasing regularly by about 0.25 Cc., at each successive dose, push the dosage up to at least double the usually advised amount, that is, to 2 Cc., and *repeat this dose until it no longer causes any local reaction.*

Tell the patient that there will be no marked change until four or five doses have been given; that there will then be an apparent aggravation of all the symptoms; that there may even be a profuse discharge from the throat and bronchi, although previously they had not given recent evidence of infection; that subsequently improvement will be rapid, provided he *follows your directions* regarding medicines and local treatment *to the letter.* Failure to attain positive results, so far as my experience has gone, may confidently be ascribed to the failure of the patient to carry out faithfully the home treatment.

In all work with bacterins, it is necessary to insure a free circulation of blood through the infected tissues, in order to carry the antibodies to the place where they are to act in combining with the living organisms and preparing them for leukocytosis. When progress does not follow as rapidly as you expected, inquiry almost invariably will bring out the admission that the treatment has been neglected or else hastily and ineffectively executed.

It is necessary—and you must impress forcibly on the patient that it really is essential—to use a hot alkaline douche and gargle, to induce congestion of the mucosa. Once a day is enough, if the application is thorough. One doucheful (1 ounce) to each nostril and the rest of a glassful for gargling is the minimum useful amount. It is well to use three or four douchefuls, but, better still, not to fail to use the one. An oil spray to follow generally is advisable. After a patient once has been pulled up roundly for neglecting the local treatment and he thereafter has tried faithfully to carry it out, he will himself notice

so great an improvement that he hardly will neglect it again.

Abnormalities requiring surgical correction should be cared for, as a rule, during the treatment, although the advice of a competent specialist should be heeded if he pronounces against operation.

Autotoxemia a Factor

The physical examination of a patient seldom reveals anything of interest outside of the upper respiratory tract until the urinary examination is made. Chronic-catarrh victims invariably are autotoxemic. The total urinary acidity to phenolphthalein ordinarily is about 50 degrees. Indican generally is present in appreciable amounts. The history shows well-marked chronic intestinal fermentation.

The first thing to do, naturally, is to “clean out, clean up, and keep clean.” Calomel, podophyllin and bilein compound, the intestinal antiseptic tablets, sodoxylin, and galactenzyme cover most of the indications. From the start, emphatically, give nuclein. I employ either the 5-minim tablets, giving 20 minims a day for at least a week, or, if a patient seems to need bracing, the nucleinated phosphates, the triple arsenates with nuclein, or some other tonic with nuclein added. Since the presence of bacteria throws a strain on the blood-forming organs, it is well to activate them to the fullest extent by giving nuclein. All my patients who have received nuclein have seemed to do better than those who did not get it, chiefly in requiring fewer injections and showing no constitutional reaction of marked degree toward the end.

The urinary acidity should be estimated each week. It goes without saying that, owing to the rapid destruction of leukocytes, which perish in their work of phagocytosis, a great deal of uric acid is set free in the system. Sodoxylin in small doses, say, a heaping teaspoonful at night or night and morning, will prevent accumulation and ease the strain upon the kidneys. The skin, of course, is kept active by means of suitable baths—in fact, elimination is looked after in every possible way, if results of the best nature are desired. The patient should be treated as a whole.

Neglect of anything that can assist nature in removing waste products is sure to delay the cure. Although it is *possible* to establish an immunity by means of the bacterin alone, it is foolish to disregard things that assist its action.

Only those who have suffered from oft-repeated colds and from chronic catarrh for many years and then at last have passed months entirely free from those symptoms, can realize the difference. I still have a band of adenoids, which I shall have removed some day when I can take time; but, barring the recent infection—already relegated to

the past by the single injection taken the other day—I have had the most comfortable seven months that I can remember. Even though the immunity is not permanent, I intend to reimmunize myself whenever necessary. An occasional hypodermic injection is a small price to pay for freedom from the nasty symptoms of catarrh.

The Doctor's Horse

By NELSON S. MAYO, D. V. S., Chicago, Illinois

Secretary of the American Veterinary Medical Association

As to Age and Sex of a Horse

IN SELECTING a horse, the question of age is important, because, other things being equal, the more years of usefulness, the more valuable is the animal; nevertheless, too much stress must not be placed upon age alone. Some horses will give more years of better service at 12 years of age than other animals will at 6 years. If a horse is well preserved, active, and suitable, two or three years in age should not be considered a serious objection.

Telling the Age

The age of horses is determined very largely by their teeth. Horses, like humans, have temporary and permanent teeth. A colt sheds its two central incisors (nippers) at 2 1-2 years of age, while the permanent incisors are "up in wear" at 3 years. The lateral incisors are shed at 3 1-2, and the permanent are up in wear at 4 years; while the corner incisors are shed at 4 1-2 years, and the permanent corner incisors are in wear at 5 years. The first 3 molars on each jaw are shed about the same time as the temporary incisors. At the age of 5 years a horse is said to have a "full mouth," meaning that all the temporary teeth have been shed and the permanent teeth are up in wear. At this age a colt becomes a horse and a filly becomes a mare.

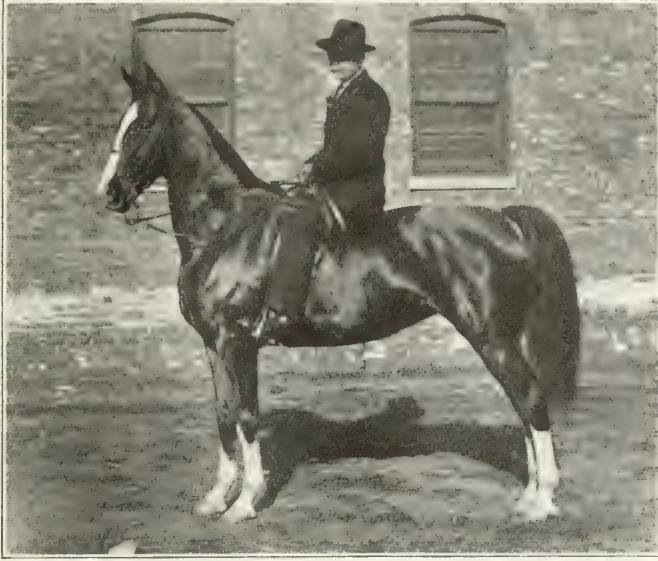
Colts under 5 years of age do not, as a rule, stand hard work well. They cannot masticate their food as well as a horse can, and they are growing and developing; and for this reason it is seldom advisable to purchase a colt unless one can favor and develop it. A mare or a horse 6 or 7 years old is mature and able to stand hard work with much less risk of permanent injury; it now is a "seasoned" horse.

The permanent teeth of young horses are very long, extending three to four inches into the maxillary bones, and give to the animal's face a full, rounded appearance. As the horse grows older, the teeth wear off on the table surface and at the same time grow out of the jawbones, until in old horses they are mere snags that frequently can be picked out of jaws with the fingers.

The incisor teeth of young horses have what commonly are called "date-cavities," which extend from the table surface into the body of the tooth. These cavities are black, surrounded by a narrow ring of white enamel, and are wide from side to side of the tooth. As the tooth wears off, these date-cavities disappear in the following order: At 6 years, from the lower central incisors; at 7, from the lower lateral incisors; and at 8 years, from the lower corner incisors. At 9 years of age, the date-cavities disappear from the central upper incisors; at 10, from the upper laterals; and between 10 and 12 years, from the corner incisors. The cavities do not wear out of the upper incisors with the regularity that they do from the lower ones. At 12 years, the date-cavities have disappeared from all the incisors and the horse is said to have a "smooth mouth."

"Bishoping" Teeth

Unscrupulous horse-dealers sometimes make artificial date-cavities in horses' teeth, a process that commonly is called "bishoping." This deception is easily recognized by one familiar with the normal date-cavity, as the narrow ring of enamel is wanting, while the general shape of the tooth varies with the age of the horse. In young animals, the incisors are wide from side to side, narrow from front to back, and form approximately a right angle with the jaw. As the horse



A Fine Type of Saddle-Horse

grows older, these teeth become narrower from side to side, wider from front to back, and form a triangular table surface. At the same time the incisor teeth form an obtuse angle with the jaw, giving the characteristic "chisel shape" seen in aged horses.

Look at the Head

In addition to the age as indicated by the teeth, the general appearance of the horse's head also is important. The full, round appearance of the face and jaws disappear, the depression above the eyes becomes marked, and in aged horses white hairs frequently appear about the eyes and temples. While the general signs for determining the age are few, close observation and a study of the teeth of horses of known age are necessary to fix the age.

The length of service that a good horse will give in a country practice depends upon so many factors that it is hard to give an esti-

mate. One of the most satisfactory carriage-horses ever owned by the writer had been driven by a physician for 13 years over the hills of New England. The writer drove this mare 2 years and then sold her to a friend who had known the animal all this time. The mare then was 21 years old but was as active and efficient as most horses are at 12 years of age.

Gelding or Mare?

The question as to whether a mare or a gelding is preferable is a debatable one. Some mares during the period of estrum are objectionable. Geldings frequently are particular about voiding urine on the road and may retain it, giving rise to spasm of the bladder and colic. This latter condition usually is relieved by placing the horse on litter where the urine will not spatter when it is voided. A warm, soapy enema also is useful.

The Principles of Cosmetic Surgery

By RALPH ST. J. PERRY, M. D., Minneapolis, Minnesota

EDITORIAL NOTE. This is the second paper in what we believe every reader will find a series as interesting as it is unusual. Doctor Perry is tilling a field with which few of us are familiar.

IN COSMETIC surgery, the results obtained will be a constant advertisement to the public of the surgeon doing the work, and they will be for or against the operator as they are good or bad. In abdominal and most other surgery mistakes and poor results are hidden by the clothing or the sod, or disclosed only at the "organ recitals" held in connection with the sewing society or ladies' aid; but the work of the cosmetician is palpable and paraded before the world where it speaks for itself. This being true, it is up to the operator to use every means and effort to secure the most satisfactory result possible.

The Instruments and Materials Needed

The instruments used in cosmetic work vary little from those used in other branches of surgery except in size and purpose, many of them being adapted from the eye and nose specialists. The knives are straight, full-curved, half-curved, and angular, blunt-pointed and sharp-pointed, sharpened on the convex, the concave, on one edge, on both edges, and on the tip; but they must be sharp, so that only clean, smooth incisions are made. Scissors are of various sizes and shapes, and, like the knives, must be sharp. The needles used must be the smallest size capable of doing the work, Hagedorn pattern preferred, for there should be the minutest possible scars from sutures. Because of the small-sized needles generally used, needle-threaders are useful adjuncts. Needle holders should be of a size adapted to the needles used and of a style which can be quickly operated and which will not break the needles. The surgeon should have a small holder, such as Boynton's, for working around the inner canthus, behind the ear, in the nostril and other places where the relations are close.

Suture materials as a rule are of the non-absorbent and non-absorbable kinds, such as silk, linen, silkgut, horse-hair, and wire. Experience has demonstrated that catgut is not dependable in cosmetic work because of its weakening and stretching through absorption, thereby lessening the tension, and because of the opportunity for wound infection which

it invites when exposed in an open wound that is handled more or less daily. All *buried* sutures, which are not to be removed, are, of course, of catgut. Suture sizes correspond with needle sizes, and should be the smallest possible.

Dressings for wounds should be absorbent, aseptic and antiseptic; gauze, cotton, wool, adhesive plasters, bandages, eduction sponge, retention netting, and so on, are all to be used as indicated. Antiseptic powders are in constant use, and of the many varieties now at the command of the profession those found most useful in my own practice are thymol iodide for general use, bismuth formic iodide for syphilitic cases, and eucrophen and orthoform in painful wounds. By a thorough preliminary cleansing and sterilization of the field of operation the necessity for the lavish use of antiseptic powders can be done away with, especially if proper antiseptic dressings be applied to the parts.

Styptics in cosmetic surgery should be conspicuous by their absence, for the local use of any blood-clotting chemical fills the tissues with a coagulum which acts as a foreign body, delays or prevents union, and invites infection. Ligatures should be used when necessary, pressure and torsion whenever possible, and the various hemostatic drugs, hypodermatic serums, and so on, whenever indicated from the history of the patient.

Methods of Sterilization

The methods of sterilization of instruments, dressings and field of operation are those commonly employed by all successful workers in surgery. Gloves and edgeless instruments are boiled or steamed; cutting instruments are sterilized first in alcohol and then dropped into a 1 : 1000 solution of mercuric cyanide. Sutures are steamed or dry sterilized as the material may require or will stand. Dressings are dry sterilized for wounds where healing is desired by first intention and may be steamed for cases where healing by granulation is desired or expected. It is a good idea to subject dusting powders to dry heat, not exceeding 100° C., for experience has led us to suspect that some pathogenic or pyo-

genic germs may live in a *dry* antiseptic powder. A temperature of 100 C. will not disorganize the iodine powders in general use.

In sterilizing the hands, my present vogue is to—

1. Wash them with coconut soap.
2. Scrub well with antiseptic soap.
3. Rub with tincture iodine.
4. Remove iodine with alcohol.
5. Rinse in 1 : 1000 mercuric-cyanide solution.

This latter solution is kept handy in a bowl for frequently washing the hands during the course of an operation, also for washing off instruments soiled only with the patient's own blood, saliva, mucus or perspiration. The field of the operation is put through the same cleansing process as the hands where the nature of the tissues does not countermand; otherwise, special measures suitable to the nature of the tissues are used.

As a part of the armamentarium there will be needed an outfit of syringes and needles for securing paraffin prosthesis electrical equipment for electrolysis, static, high-frequency, galvanic cautery, x-ray, and the several other methods of electrotherapy. Carbon-dioxide snow is very much in favor just at present and can be used advantageously in some cases. Various chemicals of a caustic nature are useful, details regarding the use of which will be given later on.

Forms of Anesthesia Found Useful

In all cosmetic procedures where pain will intrude as an element precautions must be taken to prevent such intrusion, as pain causes wincing or other movements by the patient which are most apt to interfere with the execution of some bit of delicate work and so mar the final effect. Where absolute quiet is essential a general anesthetic should be used, either chloroform or ether, the arms and legs made fast to the table and the head held firmly in the desired position. In other cases satisfactory work may be done under local anesthesia with the use of restraining straps as needed.

For some three or four years past I have used a solution containing 1 percent of quinine and urea hydrochloride and 2 percent of cocaine or novocain, with 5 drops of the 1 : 1000 solution of supracapsuline added to each two drams of the anesthetic solution. Mix this solution fresh as needed for each operation. This formula gives an immediate anesthesia, controls the hemorrhage and also gives a prolonged anesthesia lasting from twelve to forty-eight hours.

After an operation has been completed, it frequently becomes necessary to protect the parts operated upon from meddling by the patient or pernicious friends, from involuntary interference with dressings during the

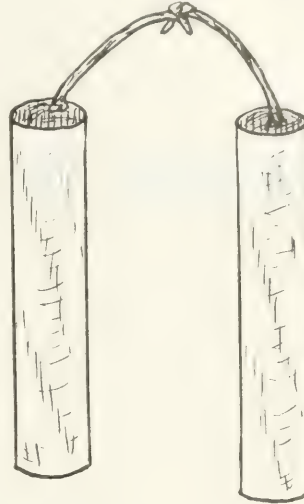


FIG. 1. Oversleeves; made of tin or pasteboard of a size suitable to the patient and fastened over the arms by means of tapes tied behind the neck. Being rigid, they prevent flexion of the elbow; the patient cannot touch the face or neck, yet can move the arms freely.

sleep and from other disturbances, and these precautions are as necessary with adults as with children. Bandages may be used to cover the field of operation and plaster of paris dressings may exclude and protect. Rigid oversleeves (Fig. 1) of metal or pasteboard will keep the hands away from the face in the cases of children; but with adults,

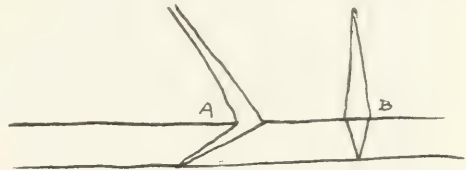


FIG. 2. A shows incision made at an angle to the plane of the skin surface. This incision permits accurate approximation and causes less scar formation than does the vertical incision shown at B.

their own common sense and strength of purpose should aid in helping the surgeon.

Surgical procedures in cosmetic work are either open, subcutaneous or submucous.

Incisions in Open Wounds

In open wounds the incisions are made at an angle to the plane of the skin surface (Fig. 2) as these oblique wounds permit better coaptation and heal with less scarring

than vertical wounds. Usually only the skin is cut through, and most cosmetic work involves the skin only. In making two incisions whose edges are to be coapted later, as in excising tissue, the incisions must be made on the same angle (Fig. 3), so that the

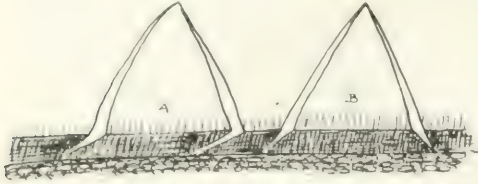


FIG. 3. A shows incisions made in parallel, allowing perfect apposition of the cut surface when approximated. B shows incisions made obliquely but *different*, hence rendering apposition of the cut surfaces practically impossible for cosmetic effects.

two opposing surfaces will correspond when the wound is closed. All incisions should be made, if possible, in one continuous clean-cut line, without snipping, hacking or nicking, as such technic produces only a form of laceration.

Incisions should be located, as nearly as possible, in places where they will be invisible, unobtrusive and not disfiguring. To this end we make use of the natural lines, wrinkles, furrows, and angles of the face (Figs. 4



FIG. 4. The lines of the face as found in early life: if not plainly visible when the face is at rest they are very distinct during the muscular action incident to the expression of the emotions, also during the course of certain diseases.

and 5) and neck. Thanks to the elasticity of the skin many operative procedures can be carried on through incisions located some distance from the actual site of the operation. Ignorance, or neglect of this principle has resulted in much disfigurement of many



FIG. 5. Lines of the face as seen in aged persons or in those who have been very free in their emotional demonstrations. Included with these is the wrinkle of the double chin and the crease over the root of the nose due to wearing spectacles.

faces and in not a few cases the work has been so crudely done as to amount to malpractice.

Plastic Work, and Transplants and "Implants"

Plastic work is one of the essential features of cosmetic surgery, one upon which depends fully three-fourths of our operative procedures. The several methods used in plastic manipulations have been most concisely tabulated as follows:

1. Simple approximation of fresh edges.
2. Sliding of parts into position after transferring the tension to adjoining localities.
3. Transplantation with a pedicle (a) by immediate implanting, and (b) by gradual implanting through successive migrations.
4. Transplantation without a pedicle (a) of large areas of tissue and (b) by skin grafting with small pieces of tissue.

5. Retrenchment, or removal of portions of superficial material, either elliptical, semi-elliptical, triangular or wedge-shaped, and healing with cicatricial contractions.

Transplants and grafts may be of any tissue and may be autoplasmic, homoplasmic or heteroplasmic. Metal, celluloid, rubber and sponge implants are frequently used as a support for parts lacking stability and as a means of eduction in granulating wounds. Implants of "bone wax" and paraffin are used to fill out cavities and to overcome minor defects of the features.

The Importance of Accurate Coaptation

Where incisions are made with intent, one consideration should be the later coaptation of the wound-edges, and the incisions should be shaped with that end in view, even if some tissue has to be sacrificed. Coaptation should be as free from wrinkles, kinks and puckers, and with as little tension as possible. To secure this without disturbing the relations of underlying tissues the peritraumal skin may be loosened up and its elasticity used to advantage. Tension sutures are also useful in preventing any undue strain upon the parts which might result in breaking up or hindering a perfect approximation. Before closing the skin wound it is *absolutely* necessary that all severed subcutaneous tissues be brought together, layer to layer, in as accurate apposition as possible and so sutured, using the smallest practicable catgut for soft tissues, and magnesium wire or chromic gut for bone.

Sutures should be put close together, not over one-quarter of an inch apart and so placed as to draw the parts together without puckering. They may be continuous, interrupted, mattress, twisted, quill, shot, button or whatever form the needs of the case or the fancy of the surgeon may dictate; *but they must coapt accurately and smoothly.*

The Importance of Drainage

Drainage is an element which enters into but few cosmetic procedures, as most of the operations are aseptic and made with the

idea of securing union by first intention. Drainage implies healing by granulation with suppuration and more or less resultant scar. In gross wounds, the rubber and glass tubes are used; in smaller ones, a few strands of silk-gut will suffice, and in many cases, especially where the presence of a foreign body in the wound is undesirable, a covering of antiseptic absorbent gauze, suitably placed, will, by its capillary attraction, draw out of the wound all excess of secretion which might offer a field for infection.

Dressings are applied to a wound to absorb discharges, to protect from germs, to protect from heat, cold, wind, rain, snow, and the like, to protect from the rude public gaze, from inquisitive friends and relatives and to protect against additional injury from extraneous sources. The materials used are those of ordinary aseptic and antiseptic practice.

As to changing dressings, my practice has been to remove the first dressing within twenty-four hours, inspect the wound, cleanse or apply such treatment as may be indicated and apply the second dressing. If healing then progresses satisfactorily, by first intention, the wound is not disturbed for several days. If healing by granulation, it is dressed as often as needed, *but not too often*, lest unnecessary handling interfere with granulation and invite infection. The special dressings for the various operations will be discussed as cases involving those operations are presented.

Subcutaneous and submucous methods are resorted to chiefly to avoid external and visible scars; in some cases these methods offer the most satisfactory methods of treatment. The method of overcoming structural deficiencies by paraffin prosthesis is one form of subcutaneous work which has brought joy to thousands. Electrolysis for the destruction of moles and removal of hair, the application of carbon dioxide, photo-therapy, the use of chemicals and other "nonsurgical" methods of treatment will be considered in cases to be presented later.

[To be continued]



What Others are Doing

COLCHICINE IN RHEUMATISM

Writing in *The Clinique* (Oct 1914, p. 570), A. F. Blackwood says that colchicum, or its active principle colchicine, should be kept in mind when treating rheumatic cases showing a gouty tendency. Doctor Blackwood declares that irregular gout is more common in America than some of us think. In such cases, the pain is of a sticking character, worse toward evening, the inflamed joint is extremely sensitive to touch, and the pains shift from joint to joint.

Try colchicine, but do not forget the importance of eliminators and antacid treatment.

NOVEL TREATMENT FOR CHRONIC MUCOUS COLITIS

Dr. G. Milton Linthicum (*Med. Rec.*, Oct. 17, 1914, p. 662) agrees with Cohnheim, that the neurotic theory of the etiology of chronic membranous enteritis is unsound. He believes that mucous colic is really an acute exacerbation of a chronic membranous colitis. The visual picture through the proctoscope reveals the presence of such an inflammatory condition, which may be either hypertrophic or atrophic.

In treating mucous colitis, Linthicum has had best success by forcing iodine fumes into the bowel. After various trials, he settled down to the use of iodine crystals.

The apparatus employed by Doctor Linthicum consists of an ordinary 500 Cc. Florence flask, with a double perforated rubber stopper connected on one side with a pressure tank or bulb, and on the other side with a glass tube, to be connected with a glass tip for insertion into the rectum. The iodine is fumed by means of a small electric stove placed beneath the flask, although a Bunsen burner or alcohol lamp may be used.

With the patient in the knee-chest position, if a man (or the Sims position, if a woman), the gas is then blown into the bowel until the patient complains of some cramping or distress, whereupon the air is allowed to escape and the insufflation is repeated until alto-

gether the vapor from 2 Grams of iodine crystals is used.

Before giving these treatments, the patient's bowels must be irrigated thoroughly. Suitable diet and regular habits are of course ordered. Constipation is a primary factor in the disease and must be removed.

By this method, Doctor Linthicum declares that he has had very excellent results, as shown by the report of four cases.

INTESTINAL PUTREFACTION AS A CAUSE OF CONVULSIONS

A striking illustration of the power of intestinal putrefaction to produce alarming symptoms is illustrated in an article by W. L. Thompson in the *Boston Medical and Surgical Journal* (Nov. 26, 1914, p. 819).

The patient was a boy of six years, who had been suffering more or less from spasmodic seizures since he was two years old. When first seen by the doctor he was having severe convulsions, and as many as forty of these a day. During the doctor's visit, of a half hour's duration, the child had two of these convulsive seizures. There was no frothing at the mouth, no outcry, no warning and no loss of consciousness, and therefore the doctor questioned the diagnosis of epilepsy which had been made by a number of other physicians. An examination of the urine showed the presence of a large quantity of the sulphoconjugate ethers, pointing to an intense putrefactive process in the intestinal canal.

A careful examination of the patient led to a rejection of the diagnosis of epilepsy and to the adoption of the following treatment: Exclusion of proteids from the diet, and the administration of a combination of zinc sulphocarbolate and cascara sagrada at four-hour intervals. After five days of this treatment, the number of convulsions had fallen from 40 a day to 12 a day.

On the sixth day, half an ounce of magnesium sulphate was administered in hot water, and upon retiring five grains of thymol was given; and the following morning another half-ounce of magnesium sulphate was ordered.

After complete evacuation of the bowels, the patient was placed upon Bulgarian-bacillus cultures and urged to drink freely of butter-milk.

Under this therapy, the patient's convulsions rapidly diminished in number, and within ten days from the beginning of treatment, they had entirely disappeared. During the succeeding seven months there has been no recurrence.

ASCARIDES AS A CAUSE OF SURGICAL DISEASES

That threadworms not always are those harmless parasites—to be grinned over—they commonly are considered, is pointedly illustrated by an article published by Schloessmann (a Suabian physician) in the *Beitrag zur Klinischen Chirurgie*, No. 3 current; indeed, they may become a serious menace when transplanted from their normal habitat, the small intestine. This is the author's evidence:

Within the brief period of two years, the author encountered not less than 11 cases of the kind in question. (Threadworms are very prevalent in those regions.) On 6 occasions, the parasites were found in the abdominal cavity itself, having penetrated the appendix-walls. Ileus was caused in 2 instances: once through a chronic obduration [thickening?] of the intestine, while in the other the partial occlusion brought on by an intestinal twist was aggravated by the presence of ascarides. Peritonitis was seen in one instance, the irritation having resulted in inflammatory exudation.

One of the cases was a peculiar ascaridial appendicitis. When the author was examining the appendix (upon laparotomy), the latter suddenly began to squirm most grotesquely and to stretch out by about half its normal length. A threadworm was found to have entered to about two-thirds of its own length. As to this feature, Schloessmann explains that not every such invasion necessarily leads to a traumatism of the organ—to terminate thus, the parasite must have remained in the appendix for some time, and feces must have accumulated.

In regard to the management of surgical diseases caused by ascarides, Schloessmann is decidedly conservative, holding that by no means always is surgical removal of the invaders imperative, even though the operator may be tempted to it after laying the abdomen open; this especially so where ileus is dependent upon spasm or thickening of the gut;

rather should conservative internal therapy still be relied upon under such circumstances. Thus, twice did he effect a cure by expelling the worms with the aid of santonin, 117 of them passing in one instance and 489 in another. On the other hand, the mechanical extraction of such worm-convolutes is liable to lead to peritonitis.

MODERN TREATMENT OF AMEBIC DYSENTERY

Special emphasis is laid upon the frequency with which amebic dysentery occurs in our northern states in an article by Edgar F. Haines in the *Boston Medical and Surgical Journal* (see p. 816, Nov. 26, 1914). He reports the experience of Giffin, of the Mayo clinic, who, during a period of two and one-half years, examined the stools of 1700 patients and found the specific *Entamoeba histolytica* in those of 79. In these 79 cases, the patients came entirely from the northern states, that is, Minnesota, Iowa, North Dakota, South Dakota, Nebraska, Wisconsin and Montana. Only a very few of them had ever traveled in the south.

Doctor Haines is warm in his praises of the emetine treatment. "Those who have had experience in administering the ipecac treatment," he says, "know only too well how much pain and discomfort are done away with by the use of emetine." While in northern China, in 1912, it was the doctor's good fortune to see several cases of amebic dysentery which were being treated with the emetine. He says: "The European physicians of that locality were loud in their praises of emetine, and it seemed no less than marvelous that patients who had the *Entamoeba histolytica* demonstrated in their stools should be up and about their work while receiving the treatment, have no uncomfortable symptoms from the drug, the stools return to normal frequency and consistency in three or four days, while the active amebas disappeared in a like period in a large percentage of the cases."

Doctor Haines, in answering the criticism that relapses occur in cases of dysentery after emetine treatment, counters with the comment that relapses occur in syphilis after treatment with mercury and salvarsan, and in malaria after the treatment with quinine; yet no one denies the specific action of the drugs used in these diseases. The cause of relapse, as he points out, is the persistence of encysted forms of the ameba in the patient's bowel. He therefore thinks

that, in order to complete the treatment of amebic dysentery after the successful use of emetine, quinine irrigations should be resorted to; in other words, combined treatment by hypodermic use of emetine and colonic irrigations with quinine should provide the modern treatment.

AFTER-PAIN OF QUININE INJECTIONS

A serious drawback to the intramuscular injection of quinine is the after-pain produced at the injection site. A. G. Peter (*The Lancet*, Oct. 24, 1914, p. 994) has discovered that this can be prevented by adding to the quinine solution (usually quinine hydrochloride is employed) 1-2 grain of quinine and urea hydrochloride.

Since using this method, Doctor Peter says he has had no complaints from patients, even from those who are ordinarily very sensitive to quinine injections.

ACONITINE TO REDUCE HIGH BLOOD PRESSURE

After years of experience with this drug, Dr. William H. Thomson (*Amer. Jour. Med. Sci.*, Jan., 1915, p. 77) has come to look upon aconite as the most satisfactory vasodilator, and he finds this drug particularly indicated in the treatment of interstitial nephritis. The vasodilator drugs most frequently used are the nitrites, including amyl nitrite, nitroglycerin, potassium nitrite and erythrol tetranitrite. These preparations are objectionable and unsatisfactory, according to Doctor Thomson. Not only do they act very suddenly and abruptly, but their action is very evanescent and therefore practically useless in the treatment of a chronic, persistent morbid condition, such as we find in arteriosclerosis, interstitial nephritis and sclerosis of the nervous tracts.

In every respect aconite is superior to the remedies of the nitrite class. One very important result of its use is *an increase in the elimination of urea*; and since the chief business of the kidneys is to eliminate urea, and since also in interstitial nephritis the quantity of urea excreted is diminished from the very beginning, the importance of a remedy which will increase its output is very apparent.

Doctor Thomson declares that in a series of cases under his care in the Roosevelt Hospital, the quantity of urea eliminated following the administration of aconite was doubled in a large proportion; in two cases

it was increased to three times the amount present before this treatment was begun. At the same time there was improvement in all the other nephritic symptoms, including shortness of breath, vertigo, anginous pains, and melancholia, as illustrated by a number of cases which Doctor Thomson describes.

Doctor Thomson advocates the use of the old 35 percent tincture of aconite (U. S. Pharmacopeia of 1890) instead of the later preparation, which is only 10 percent. He says that he has given as much as 10 drops of this stronger tincture four times a day with excellent results. Large doses are necessary, since "the proper dose of a functional medicine is not reached until it causes its own symptoms."

The importance of employing a preparation of aconite which can be depended upon will naturally suggest to many of us the use of aconitine rather than one of the more or less unreliable galenical preparations. Aconitine can be safely pushed "to effect" in the conditions described.

THE EARLY SYMPTOMS OF TETANUS

It has been demonstrated again and again that tetanus can be absolutely prevented by the early injection of 1000 to 1500 units of a reliable tetanus antitoxin. Also, if the antitoxin can be given at the very beginning of symptoms, there is a fair chance of curing the patient. However, if the antitoxin is given after the disease is fully established, the likelihood of cure is not very great.

Under the circumstances, it is important that the physician should be familiar with what MacConkey (*Brit. Med. Jour.*, Oct. 10, 1914, p. 609) calls the "premonitory symptoms." These he says are varied and changeable, and commencing tetanus has been mistaken for a "cold," muscular rheumatism, stiff neck, sore-throat, influenza, mumps, and the like. He gives the premonitory symptoms as follows:

A day or so after the infection there may be general restlessness, changing suddenly to a desire to rest.

Sleeplessness with distressing dreams, and sometimes nightly delirium.

Difficulty in micturition due to spasm of the sphincter vesicae, which may last from a few minutes to half an hour.

Temporary giddiness, violent headache, excessive yawning.

The facial appearance changes and the patient looks anxious, though there is no risus sardonicus as yet.

There may be trembling of the tongue, which is put out to one side.

There is often profuse sweating, and darting pains in various parts may cause annoyance.

The patient may have a feeling of chilliness, and there may be some swelling, without redness locally, of the injured member, and throbbing of its arteries, notwithstanding that the limb is raised.

Slight jerking may follow pressure on the flexor tendons, and these muscles may be noticed to be in a condition of increased irritability.

THE COLLECTION OF LACTUCARIUM

At the last meeting of the International Congress of Pharmacy held in The Hague, Prof. L. van Itallie, of Leyden, read a short paper (*Jour. Pharm. et Chim.*, Nov. 16, 1913, p. 449), in which he described the method of collecting lactucarium at several places between Cochem and Punderig; the lactuca virosa plant being found in the wild state along the entire length of the river Mosel.

The height of the flowering lettuce-plant generally does not exceed one meter, although occasionally plants are found which reach the height of the cultivated plant. These when in flower measure two meters and a half, the stalk being a little more than one centimeter and the leaves from 12 to 15 centimeters. The stem is more or less woody and rarely exceeds 5 centimeters in diameter.

The reduction in the quantity of lactucarium employed has been so great that the cultivation of the plant is not as extensive as it formerly was. The author visited gardens at Kaimt, a little village near Zell. These gardens are situated at the foot of the mountain, and they rarely exceed 200 square meters in size. The plants are planted in May and transplanted in September.

The year following, in May or June, the plants flower and then are decapitated. The juice flows immediately and covers the cut surface. From then until the month of September, small sections are cut from the stalk, this being repeated, if time permits, five or six times a day. The women cut off one after another ten or twelve of the stalks, then return to the first, during which time the milk-juice has become thick enough to be collected, with the finger and knife, from the surface of the cut.

When the milk of ten or twelve plants has been collected in little bowls, it is allowed to dry slowly in the sun, possibly being removed

from the bowls in the afternoon. In twenty-four hours the juice-lump is dry enough to be cut up into smaller pieces, which are again exposed to the sun. The milky juice, which is quite clear and of a white color, soon becomes yellow, and finally a pure brown, when it constitutes our lactucarium.

DANGEROUS NATURE OF BROMOFORM

In reporting a recent case from his practice, E. Guth, of Cladno (Hungaria), adds to the experience of others who have found bromoform a somewhat dangerous agent. This author tells (*Prag. Med. Woch.*; cf. *Muench. Med. Woch.*, 1914, p. 1242) of the toxic symptoms produced by this sedative in a child of 5 years, troubled with cough, after having taken [by mistake?] 6 Grams of it at one dose.

The child was seized with severe spasms and became unconscious, as the main symptoms of poisoning; from which it was relieved by means of artificial inhalation of oxygen, injection of camphor, and faradization. In view of the uncertainty of action, and more so as to its dosage, coupled with the danger involved, Guth recommends entire abandonment of this agent therapeutically.

AN ANTIVEGETARIAN ARGUMENT

The argument in favor of vegetarianism has been given us so many times by its enthusiastic advocates that it is refreshing to hear once in a while from the other side. We find an excellent statement of the case in a few words in a paper by Harry Campbell, in *The British Medical Journal* of October 3, 1914, p. 578). He says:

"Some are obsessed with an altogether groundless fear as regards the influence of animal food on the human organism. The endeavor to subsist on a dietary which shall not necessitate the taking of life is a commendable ideal, and one, perhaps, which man may one day realize—approximately, at least; but the view that man is by nature a purely vegetable feeder and that animal food has necessarily an injurious effect upon him is wholly fallacious.

"The fact is, as I have elsewhere sought to show, man owes his present exalted position in the animal scale to his carnivorousness. This truth may not be palatable to the sentimentalists, but it is one which must be fairly and squarely faced. It was the search after animal food which led man's arboreal ancestors

to change an arboreal for a terrestrial life, and it was, I am convinced, the conditions entailed by a hunting career which brought about the evolution of the human. For, observe the curious situation of the pre-human anthropoid when he took to hunting—assuredly one of the most eventful and dramatic in the whole history of organic evolution. Here was a being lacking the stereotyped equipment for slaughter, instinctive and anatomical, of the carnivora, but gifted with an intelligence surpassing that of any other creature, and endowed with prehensile hands capable of giving effect to that intelligence. It was a situation in which intelligence counted in the life-struggle as it had never counted before, and it inevitably led to the evolution of man.

"This agile, intelligent, hand-endowed precursor of man was compelled to rely upon his *intelligence* in hunting his prey; for blind instinct he had to substitute strategy, for natural weapons, weapons made by hand. Once the prehuman ape started on his career of intelligent, as against instinctive, hunter, he began a struggle in which it was inevitable that a higher and ever higher grade of intelligence should continue to evolve, until sufficient mental capacity had been attained to render its possessor supreme as a primitive hunter—a grade of intelligence little short, I imagine, of that of the Australian aboriginal."

THE INJECTION TREATMENT OF HEMORRHOIDS

Surgeons generally have assumed such a contemptuous attitude toward the injection treatment of hemorrhoids that it requires some courage (especially on the part of a really eminent practitioner) to come out boldly in advocacy of the nonsurgical method. This, however, is exactly what Sir James F. Goodhart does in the December, 1914, number of the *London Practitioner*.

Goodhart does more than excuse the injection method of treatment; he goes a step farther, and declares that, in his opinion, the injection method is really safer than radical operation, and he makes a distinct plea for more frequent use of injection. "And I do so," he says, "because I happen to have seen a good deal of the partial and poor successes of the common operations, whereas the results of injection have seemed to me to be uniformly good. Some years ago, I became very dissatisfied with the results of ligature—more recently I have known of poor results by the Whitehead operation as

well—first, because the patient was laid up for several weeks; secondly, because the shock of the operation may be very detrimental; thirdly, because, even within my own small experience, I have known of cases of serious local trouble afterwards, invaliding the patient for a long time; fourthly, I have many times found a definite membranous stricture at the anus, where an operation has been performed; and, lastly, so many have told me that there has remained, more or less permanently after operation, a state of discomfort in one way or another that was by no means pleasant."

Then, continuing, Goodhart says: "For many years now I have never sent any patient who might ask about the treatment of hemorrhoids to anyone who has not been known to me as largely adopting this method of injection, and I have never heard of a failure."

While he admits that there are cases which are not suitable for this treatment, yet, even in some of the doubtful cases in which he questioned the advisability of this method of treatment, Sir James declares that the result has been perfectly satisfactory. He has heard of the risk of embolism after injection, and yet he raises the question: "Does it ever occur? or is it only one of those statements made perhaps on the strength of a single case, and then handed on as authoritative? Why should it? Injection produces a local thrombosis truly, so does the natural course of the disease in many cases, and in so doing many a pile is cured spontaneously, as is very well known."

Does the objection to the injection treatment in America rest upon the same flimsy basis as Sir James alleges to be the case in England? Or is it as safe (or safer), as effective (or more effective), as the ligature, cautery, or knife? We should like to know. Who can (and will) enlighten us?

COMPARATIVE TEMPERATURES OF THE RECTUM AND THE ARMPIT

Remembering the fact that the rectal temperature is markedly elevated immediately following severe exertion, especially of the lower extremities (running, forced marches), with the temperature of the armpit remaining unaffected or even lowered, M. Englaender, of Vienna (*Deut. Med. Woch.*, 1914, No. 14), instituted pertinent observations of such temperature differences in inflammatory rheumatism, tuberculosis, *orthos* albuminuria, and vitium cordis.

In the conditions named, the author observed a constant disparity between the temperatures of the two localities; also, the rectal measurement positively is the more reliable. Further, if the temperature of the rectum registers higher than normal for the given time of day, even though the subject is at rest, then not merely a hyperthermia obtains, but it must be looked upon as a sign of some pathologic process—fever.

THE INTRAVENOUS TREATMENT OF ARTHRITIS

Some months ago (see p. 423, May, 1914), we gave the experience of two New York physicians who were using the salicylates intravenously in treating rheumatism. Another New York physician who is using this method successfully is Albert Comstock (*N. Y. Med. Jour.*, Dec. 5, 1914, p. 1113), who employs the following solution:

Sodium salicylate.....	gr. 640
Guaiaicol.....	gr. 640
Glycerin.....	gr. 640
Sterile distilled water q. s. ad.....	Cc. 2000

N. B.—This solution must be filtered and placed in a sterile bottle, and will keep for about a week if shielded from the light.

This is usually given in a dose of 250 Cc., at a temperature of 110° F. It may be introduced into the vein with an ordinary Wassermann needle by direct stab, or, if preferred, after exposing the vein by dissection, using a cannula, of course, after local anesthesia.

Doctor Comstock resorts to this treatment, not only in acute rheumatism and acute gouty arthritis, but also in chronic muscular rheumatism and chronic arthritis. The method is contraindicated when there is atheromatous disease, nephritis, heart disease and inflammatory conditions outside the joints. Before administering the injection, the bowels are thoroughly cleaned out with calomel and a soapsuds enema, and the arm scrubbed about the elbow with green soap, followed by mercury-bichloride sterilization.

The first effect of the injection is tingling throughout the body and a coal-tar taste in the mouth, due to the guaiaicol. The face becomes congested and free perspiration begins. Slight delirium follows, lasting from 15 to 30 minutes. After injection, the arm must be dressed aseptically, a tight bandage being employed if the stab method of injection is resorted to, in order to prevent seepage into the cellular tissues.

In acute articular rheumatism, the results following the use of this method of treatment

are almost instantaneous. The fever promptly subsides and within 24 hours the patient usually asks to get up. In muscular rheumatism, the results are not quite so prompt; sometimes a second treatment, in about two or three days, may be required. In chronic cases, the injection must often be repeated two or three times, at intervals of three or four days, before the patient can be pronounced cured.

Doctor Comstock has treated more than 50 cases by this method, and has never seen any bad results except from the slight delirium, to which reference has already been made. In one or two patients there was some gastroenteritis. Blood pressure is not markedly affected.

PILOCARPINE TO ABORT ERYSIPELAS

Da Costa and Bartholow, of Jefferson Medical College, long ago recommended the routine use of pilocarpine to abort a beginning erysipelas. W. A. Wiseman (*Ill. Med. Jour.*, Dec., 1914, p. 587) has been using the pilocarpine treatment for a good many years and has found it very satisfactory. He offers as an explanation of the benefit following its use the discovery of Waldstein, that pilocarpine greatly increases the number of white blood-corpuscles. By so doing, this alkaloid directly combats the streptococcus invasion now known to be the cause of erysipelas.

Doctor Wiseman's experience is in accord with that of many readers of CLINICAL MEDICINE, which for many years has been advocating the use of pilocarpine, especially in the earlier, formative stage of erysipelas. The drug should be given hypodermically, and just as soon as the diagnosis can be made.

DOES PYORRHEA CAUSE IRITIS?

W. M. Beaumont, writing in *The British Medical Journal*, September 26, 1914 (p. 525), quotes Lang's statistics, to the effect that 64 percent of the cases of iritis attributed to sepsis are caused by pyorrhea alveolaris. He is convinced that this disease is undoubtedly the most frequent cause of this form of iritis, although, as he declares, "it cannot be too insistently brought to mind that the patient with pyorrhea may also be a sufferer from syphilis or gonorrhea." However, in a patient suffering from this form of eye disease, careful examination should be made of the mouth and, if it is diseased, appropriate treatment should be instituted. Doctor

Beaumont says that drastic treatment is warranted in these cases, and, if necessary, all foci of disease should be removed by extraction of the offending teeth. As he puts it, "The cure of iritis is of paramount importance, and it is better to lose thirty-two teeth than one eye."

Now that it has been demonstrated that we have in emetine hydrochloride a real specific for pyorrhea, through the use of which we can not only cure the disease but usually save the teeth at the same time, it is apparent that this alkaloid should be given a thorough trial whenever the iritis is complicated with Riggs' disease. However, the possibility of syphilitic infection should always be kept in mind. Wassermann tests will usually settle the diagnosis.

HUMORISTICS: ORIENTAL MODESTY EXEMPLIFIED

A strikingly characteristic humorous episode is related in a recent issue of the *Muenchener Medizinische Wochenschrift*, which, having been yielded space in that staid, dignified publication, may well be accepted at its face value. The story runs thuswise:

At the occasion of the second International Leprosy Conference held in Bergen in the year 1906, Kitasato, the Japanese investigator, formerly connected with the Bacteriologic Institute at Berlin, was presented to King Haakon. The latter, as a compliment, remarked, "You were the associate, were you not, of Koch and Behring?" Came the answer, in dignified tones: "Your Majesty will pardon, Koch and Behring were my associates in the work."

INDICANEMIA AND ACETONEMIA (UREMIA)

Neither in the sound nor in the sick, T. Tschertkoff, of Charlottenburg, sets forth (*Deut. Med. Woch.*, 1914, No. 36; cf. *Muench. Med. Woch.*, 1914, p. 1976), can retained urea or indican be demonstrated in the blood-serum, unless there is renal insufficiency, and then independent of the diet. Further, in serum of nephritics exhibiting marked urea retention indican is a regular constituent, and invariably present when the urea falls below 1.5 pro mille. In chronic nephritis, indicanemia in connection with a urea content of the urine as low as 1.5 pro mille constitutes an unfavorable prognosis, a symptom indicative of a serious, unremediable

alteration of the kidneys. As the sole sign of renal insufficiency, indicanurea remains even in those cases where acetonemia (uremia) has been reduced to norm by means of extraneous, alimentary influences.

ANTITHYREOIDIN IN EXOPHTHALMIC GOITER VALUELESS?

At the Serum Institute at Copenhagen, C. Sonne has been investigating the influence of antithyroidin upon Basedow's disease, or, exophthalmic goiter. His experiments (described in full in the *Zeitschrift fuer Klinische Medizin*, Bd. 80, No. 3) were modified in every possible direction and properly controlled, and the subjects, besides rabbits and cavies, were 80 victims of the malady. The conclusions finally arrived at were, that no specific action whatever could be observed from the "socalled" antithyroidin.

FIRST AID TO THOSE IN NEED OF ARTIFICIAL RESPIRATION

The Bureau of Mines has recently published ("Technical Paper 77") the report of the Committee on Resuscitation from Mine-Gases, the members of this committee being W. B. Cannon, George W. Crile, Joseph Erlanger, Yandell Henderson, and S. T. Meltzer. One of the results of these investigations is the recommendation of the Bureau of Mines that whenever, for whatever reason, artificial respiration is instituted, the following methods be adopted:

In gassing (being overcome by gases), remove the victim at once from the noxious atmosphere. Carry him quickly out into the fresh air and instantly institute manual artificial respiration. Do not stop to loosen any clothing, for every moment of delay diminishes the chance of recovery.

In case of electric shock, break the electric current instantly. Free the patient from the current with a single quick motion, using any dry nonconductor (clothing, rope, glass, board) to move the patient or the charged wire. Beware of using for the purpose any metal or even moist material. Meantime have every effort made to shut off the electric current.

Attend instantly to the victim's breathing. If the victim is not breathing, manual artificial respiration must be resorted to at once.

If the patient is breathing slowly and regularly, do not employ artificial respiration, but let nature restore breathing unaided.

In gas-poisoning, administer oxygen, if available. Also employ manual artificial respiration. The oxygen is supplied through a breathing-bag from a cylinder. The latter, for this purpose, has a reducing valve, and is supplied with connecting tubes and face-mask, and an inspiratory and an expiratory valve, the latter communicating directly with the atmosphere.

No mechanical breathing device should be used for resuscitating, except it be one operated by hand and having no suction-effect on the lungs.

Employ the Schaefer, or prone, pressure method of artificial respiration. Begin at once. A moment's delay is serious. Proceed as directed in "Miners' Circulars" Nos. 5 and 8 of the Bureau of Mines.

Patiently continue, without interruption, the artificial respiration, if necessary, for two hours or longer, until natural breathing is restored. If natural breathing stops after having been restored, again institute artificial respiration.

Do not give the patient any liquid by mouth until he is fully conscious.

Place him where there is fresh air, but keep his body warm.

Send for the nearest doctor as soon as the accident is discovered.

The Committee of the Bureau of Mines referred to above also discusses at considerable length, in "Technical Paper 77," the four mechanical devices (pulmotor, the Brat apparatus, the lungmotor, and the salvator) that are now on the market and in quite common use for instituting artificial respiration. A careful analysis is made of the literature upon the subject of devices of this kind, and the final conclusion of the committee is that on the whole it disapproves of them, or at least of the pulmotor and the Brat apparatus, which two it has examined. The committee declare that these instruments are objectionable, because repeated suction of the air from the lungs is not physiological and, if continued, is likely to result in injury to the lungs and to inadequate inflation. It also disapproves of the pulmotor, because the automatic mechanism is so easily disturbed as to be very liable to fail at critical moments.

The committee, however, recommends the use of an apparatus devised by one of its members, Dr. S. T. Meltzer. One of the objections to the pulmotor and similar apparatus, namely, the fact that it permits of entrance of air into the stomach, is guarded against by the use of the Meltzer apparatus. In addition, a weight is to be placed upon the pa-

tient's abdomen, in order further to restrict the entrance of air into the alimentary canal. It is declared that this apparatus is free from sucking action during expiration, is light, simple, inexpensive, is readily understood by laymen, and can be used to deliver pure oxygen. This is an important consideration in the treatment of gas-cases.

ON THE SIGNIFICANCE OF ALBUMIN IN THE SPUTUM OF CONSUMPTIVES

G. Hafemann, of Beringhausen, makes the following concrete pronouncements (*Deut. Med. Woch.*, 1914, No. 36; cf. *Muench. Med. Woch.*, 1914, p. 1976): As a fundamental rule, the following may be accepted: If the sputum of tuberculous persons contains no albumin, no bacilli are present. Conversely, if tubercle bacilli are found in the sputum, then it also contains albumin. (Albumin alone in closed cases.) Quite generally accepted is also this dictum: A single positive find of albumin does not permit of any definite conclusions; on the other hand, a single negative finding excludes existence of phthisis.

The author, in addition, assumes that the albumin in the sputum of consumptives is serum-albumin derived from the fine bronchial alveolar tubules [orig.—"gefasse"—vessels—?]. He also inclines to the idea that this albumin originates from the metabolic and catabolic processes of the tubercle bacilli themselves.

PEANUT-MILK REPLACING ALMOND-MILK FOR INFANTS

While in this country we hardly ever hear of the so-called almond-milk for feeding infants, the emulsion of sweet almonds is largely in vogue in Europe, particularly so in Germany and closely connected Scandinavian countries, being a favorite nutrient for the newborn and older infants when deprived of mother-milk, as also in digestive troubles when milk must be withheld—given alkalized in icterus neonatorum. Continental physicians also prescribe "lac amygdalæ" largely for the body of certain mixtures taken in tablespoonful doses, to serve as a bland diluent.

Unfortunately the cost necessarily confines its use to the more prosperous, a situation now aggravated by the present rising price of almonds. Hence, it is well that someone (R. Randnitz, of Prague, in *Duet. Med. Woch.*, 1914, No. 36) points out the equal

value of peanut-emulsion, which satisfactorily replaces the other, while at prevailing prices it costs but one-sixth as much. The peanuts used must be roasted, and Chinese, Javanese, and African varieties (these in European commerce) are named as serviceable; there seems no reason, though, why any other—the American—should not do as well.

According to circumstances and age of child, when the "milk" serves as food, there are added sugar, malt-extract, farinaceous substances, acorn-decoction, and, later, increasing proportions of milk, with gradual transition—for older children—to normal diet. Directions for preparing the emulsion are found in the Dispensatories and Pharmacopeias. [The writer of these lines, in years gone by, never cast away the pulp left after expressing the emulsion of almonds: with a little sugar incorporated, it formed a palatable and nourishing sweetmeat.]

OIL OF TURPENTINE AS A PROPHYLACTIC AGAINST UTERINE INFECTION

For the prevention of puerperal and other gynecologic infections, H. Cramer (*Monatssch. f. Geburtsh.*; cf. *Ther. Monatsh.*, 1914, No. 8) has found oil of turpentine an excellent agent; having employed it for this purpose extensively in the Friedrich-Wilhelm-Stiftung at Bonn. He simply moistens a wad of cotton with the oil and swabs out with it the uterine cavity. If it is a case of abortion, prior complete removal of placental remnants, of course, is imperative. The turpentine-oil, in the author's opinion, acts not alone as a bactericide, but also by inducing a massive afflux to the wound-surfaces of leukocytes. During the first few days, vaginal irrigations are to be omitted.

As a prophylactic measure, Cramer introduces oil of turpentine tampons preliminary to operations in the vagina, ascribing much of his good results in operations for carcinoma to this measure.

FORMALDEHYDE FOR CLIMACTERIC BLEEDING

In a contribution to the *Zentralblatt fuer Gynaekologie* (1914, No. 36), E. Gerstenberg, of Berlin, reminds the readers that as long

ago as 1900 he recommended formalin of full strength (undiluted 40 p.c.) for checking the bleeding of the menopause. Now, after an experience of fifteen years with this treatment, he reaffirms his claims. His procedure is a simple one.

Playfair sounds are wrapt with absorbent cotton and these saturated with the concentrated solution of formaldehyde. Then these sounds (several of them) are introduced into the womb and held in contact for fifty seconds. After their removal, an absorbent-cotton wad (with string attached) is placed before the portio, this to be removed in from three to twelve hours. (The determining factor is not named.—Ed.) Untoward effects, such as colic, swooning, stenosis, infection, never have occurred; the sole accident to be feared being possible detachment and loss of a formalin cotton wad in the womb.

EBNER'S DECALCIFYING LIQUID

For decalcifying microscopical objects, Ebner recommends (*Pharm. Praxis*, 1913, p. 259) the following fluid: (a) Hydrochloric acid, C. P., Cc. 7; distilled water, Cc. 100; cold-saturated solution of sodium chloride, Cc. 100; or, (b) Hydrochloric acid, Gm. 2.5; sodium chloride, Gm. 2.5; water, Cc. 100; alcohol, Cc. 500.

HEMATOLOGIC ASPECTS OF VARIOLA AND VACCINIA

Interesting and clinically valuable studies of the blood in smallpox and in cowpox have been conducted by M. Schatzmann, of the Medical Clinic at Bern, the results of which he has published in the *Zeitschrift fuer Klinische Medizin* (Bd. 80, No. 4). The work concerns the changes in the different cell-elements of the blood during the various stages and phases of the two respective pathologic conditions. We will not here reproduce the fulsome figures presented, among which the leukocytes stand out strikingly (they may be looked up, also, in the *Muench. Med. Woch.*, Sept. 24, 1914), but want to point out the fact ascertained, that there exists an almost complete analogy between the blood-pictures of the two processes, in all respects; thus proving the conception of the virtual identity of variola and vaccinia.



Miscellaneous Articles

From the Firing Line in Belgium

FROM an experience of over five months in active operation on the field, I have seen many changes in the medical adjustments necessary to meet the demands of the shifting conditions.

In the regiment to which I was attached, made up very largely of men of more than usual capacity and standing in the social and financial world, not over ten or a dozen are known to remain among the living. Some of them probably are prisoners, some are in the hospitals, but the regiment is, practically, destroyed.

My experience of getting on the firing-line, then being transferred to the hospitals in the rear, and finally returning to the firing-line by request has convinced me that the surgical knowledge one can get in this tumultuous conflict is very small, compared with the risk and exposure.

All the hospitals in France and Belgium have a changing population and the study of individual cases is very transient. In the American Hospital of the Red Cross near Paris the changes are less, but even here the moment a patient becomes able to go out, he is sent home, so as to give place to others who need the more urgent treatment.

Many of the English hospitals at Boulogne are managed by most excellent men, but their opportunities are all too short to follow cases long enough to secure data that are at all reliable. Like all the other hospitals, they are constantly being emptied, to be refilled from the front.

One event will be of interest, because it gives some idea of this confusional state. The Germans, for several days, made most strenuous efforts to break through the line at points within a few miles of each other. Two field hospitals were established, and the wounded were very numerous and required all the attention and aid that could be supplied.

One day, after a severe engagement, I was particularly impressed with the independent work of a Red Cross surgeon, who had a red handkerchief around his neck. There was

something so independent and clever in his work, without hesitation or deferring to the opinions of others, that I was attracted to him. A chief superior of hospitals, it was my duty to look over the work done. Many of the surgeons would hesitate and consult with others in grave operations. Sometimes this hesitation would be evident in the attention of the other surgeon who would be attracted to a patient to observe and advise. I saw that this man went right on, without the slightest hesitation; and it was evident that he was a very skilful operator, as well as a man of good judgment.

One morning, after a very serious operation, I said to him: "You are a good operator, 'Yank,'" having formed the impression that he was an American; so, I addressed him in this jocose way. He turned in a moment and said, "Yes, 'Johnnie,' I am."

I said, "What are you doing here?"

He answered, "God only knows, but if I get back to old Kentuck' you will never see me following the army any more."

I inquired why he did not work in the hospitals in the rear, saying that his work would be of far more value there than on the front. He answered laconically: "Too much red tape. I am not fitted to work under a man who knows less than I do. Can't get any information down there. They follow plans and systems. Up here, we can do as we think best, and nobody calls us to question."

I said: "You are right, 'Yank'. That's why I am here on the front. There is more real, genuine surgical work here than down the line. We see things just as they are here, but the minute the poor patient goes to the rear innumerable complications set in."

After a pleasant few minutes' conversation, I invited him to take supper with me at 6 o'clock. He said he would come. I said, "We ought to get acquainted." We called each other "Yank" and "Johnnie", and he seemed pleased at this free and easy familiarity.

I went to another part of the line. I returned before 6 o'clock and waited for half an hour for my new-found friend. He did not come. The next day I made inquiries and found that he had gone out toward the trenches at about 4 o'clock in the afternoon with some stretcher-bearers, and that was the last seen of him. At about that time, the Germans had made a furious charge on the lines in that neighborhood, and, judging from the number of wounded that were brought back that night and early next morning, the mortality was very great. The next day I made other inquiries, but no one could give me any clue. I tried to find the doctor's name on the hospital-list, but, as he had only been there a day or two from the rear hospitals, his accession was not recorded, and, if so, there was no clue, as I had not asked him about his name or location.

The third day afterward, I found that a number of prisoners had been taken that afternoon, and the next day the dead were so numerous that they had been put in trenches, with little reference as to who they were or anything concerning them. Thus my new-found friend, Doctor "Yank," disappeared. Whether he was captured and is a prisoner, or whether he was killed and buried in the trenches, I do not know.

The cold weather of Christmas and the heavy snows checked the firing, except by the artillery. Every now and then a few trenches would be the scene of a short bloody conflict, sometimes being taken and then retaken; and the wounded brought back, showed more than ever evidence of stab- and bullet-wounds.

The sharpshooters are in constant evidence and every exposed situation is full of peril. Experience has brought a great deal of practical mobilization of the field hospitals in the transportation of the wounded, and the ability to adapt themselves to any sudden change that may occur.

The motor soup-kitchens have developed a degree of perfection that would astonish one, both at the hospitals and in the trenches. The rations, soup, and coffee and bread, are delivered with the utmost regularity and perfection, and, while there are hardships, there certainly never was an army better fed and better cared for than the English troops on the battle-line today.

Motor ambulances, to take the wounded back, and field hospitals established in any available place possible are attaining a high degree of perfection, and the surgeons and

nurses are acquiring a skill and adaptability that is really astonishing.

One morning during the holidays over 500 wounded men passed through one of the field hospitals. At another place, a few miles farther on, an equally large number. This gives an idea of the work that is done and the fierceness of the conflict on the front.

It is the opinion of those who know that the entrenchments of both armies have reached a practical deadlock situation which is not likely to change, unless some very startling event occurs. Abundant supplies of winter clothing and comforts for the troops on the front are coming in all the time, and were it not for the continued artillery duels the situation would not seem so distressing.

My work covering over a dozen field hospitals would seem to indicate that there is not much that is new in the surgical treatment which is given, but that the manner of receiving and sending the patients back is becoming more and more efficient. Occasionally a fever case or one of acute rheumatism comes through our hands, but is promptly transferred to places in the rear, where these cases are exclusively treated.

I think the home surgeon should be thankful that he is not here on the front or in the hospitals in the rear, trying to become more experienced and proficient, but really picking up very little that is new and observing very much less in the operative lines than in any previous war.

The medical journals of the future will be full of stories of experiences of surgeons and laymen, much of which will be fiction. The facts are few and by no means extreme or startling. Treatment of contusions, concussions, perforating wounds from balls and shells constitute the daily routine. Occasionally a case of traumatic shock startles us a little. The explosion of a shell, while not producing any visible injury, has caused unconsciousness and coma in some cases. These men are carried back to the rear, paralyzed. Several days pass before they regain full possession of themselves.

Exactly what has happened cannot be determined. A very useful and capable head-dresser in one of the hospitals was suddenly made unconscious by a bursting shell, and there was not the slightest evidence of any external injury. He was taken back to the rear, recovered his consciousness, but was found to be hemiplegic. Occasionally, something out of the usual will occur, but, as we have only the first examination, we have a

very imperfect idea of what really has occurred and what will be the consequence.

Many physicians are resigning from the service, and younger men are taking their places. This no doubt is owing to the conviction that the end is not yet, and the desultory fighting of the present may continue for some little time. The romance and the novelty of war passes away very quickly for the medical man, and the conflicting questions of whether it is his duty to stay on the front, in the rear or go home are troublesome ones.

“BRITON.”

“WHAT CAN THE DOCTOR DO FOR HIMSELF?”

The editorial in the December issue of THE AMERICAN JOURNAL OF CLINICAL MEDICINE, under the above title, proved interesting reading to me, and I presume to a thousand or so of other physicians; and, I must confess that, while I cannot complain of the loss of any hair through rubbing it off in trying to solve my own problems of the professional side, I can say that I have lost considerable sleep over the financial matter and creased my brow with several lines that would better be off.

This is not a problem that can be solved by one editor or by one lone practicing physician; for, while there are general principles that apply to every physician engaged in active practice, that will make for success, yet, he must have sufficient reasoning-capacity to work out the details of his success, in the section of the country in which he is living and under the conditions in which he is placed.

The mere matter of fees is vastly different in one section of the United States from the standards prevailing in some other parts. When it comes to making collections, the doctor will have to take into consideration whether his people have money in the bank with which to pay their bills, or whether their payday comes every week or month or twice a year or only once.

I enjoy reading the experiences of other physicians, whether in the way they conduct the business end of the profession or in relating the many professional experiences that come to them. And the reason why I have not indulged in writing my own thoughts on the matter has been that, after reading the writings of others, their work seemed so much better than what I was able to do that naturally I remained in the background.

Still, it is not fair to receive continually, and keep on expecting to receive, without making any effort to reciprocate. And, though my experiences may not be as rosy as those of others nor so instructive, yet, by study and the application of better business principles to the business I have gradually increased my proficiency as a physician and also improved my earning capacity, and not only earned more money, but also collected more closely as years have come and gone.

My methods and experiences may be of service to some man or woman in the daily routine of looking after the ills of the human race, and if even one such person be benefited I shall feel amply remunerated for the effort thus put forth.

There are many features that enter into the career of a practicing physician and make for success. Some men seemingly are endowed with all the characteristics necessary, and they enter the field of medicine fitted in every respect for an ever increasing practice and a lucrative income. The great majority of men who enter the ranks of physicians and surgeons are handicapped in one way or another. They have to learn in the daily ups and downs of life the lessons of how to be successful. A few learn rapidly and well; a greater number are a lifetime at the job, and in other instances there are some who never learn.

The statement that “doctors are poor business men” has been made so often that the laity, and even the physicians themselves, have become to feel that this is an axiom. However, when you look over the field of business, from the farmer to the manufacturer, and take account of the failures recorded from year to year and then compare the result with the failures among the medical fraternity, you will conclude that we are not such gross imbeciles as some persons would have you believe. The reason for this general idea of the physician's business unfitness is, that we come in closer contact with the men who are really successful in their particular line. They were experienced in business methods before they entered into competition with others in the same kind of enterprise; while, as a rule, the physician enters the field of medicine without any previous business experience. And the contrast between the seasoned business man and the practicing physician is, indeed, great, and often is commented upon. Hence, the pooriness of our commercial rating and business standing.

One of the first prerequisites of a successful physician is a thorough medical education. This, of course, begins in the school where the aspirant takes his M. D. degree, and which furnishes him with a foundation upon which to build his future work and structure. Whether it shall stand as a monument to his skill, or fall, depends upon the mind that rears the structure.

If financially able, the aspirant, who, after securing a degree from the school of choice, will take a year's study in each of the other two schools of medicine, will thus be much better fitted to prescribe intelligently for patients than will the one who confines himself to a single system. Some doctor may pooh-pooh this statement; but to him who does I will say, however well versed he may be and however successful, he will know more by understanding how the other fellow does his work.

It is a grave mistake for any person who receives a degree in medicine to think that his days of study and research are over. In reality he has only begun. While he may not do so in quite as systematic and regular form as when in school, he does so now with more precision and thoroughness; not as a parrot learns, but with the thought of being ready to use this knowledge at a moment's notice. If successful, he will have to keep on studying, in order to keep abreast of the progress being made in the way of doing things—and that really is what counts with the patrons.

However, he who confines his reading to the ordinary textbooks and the state medical journals makes a grave mistake. Well-selected matter of this kind, of course, should be upon your desk or at hand for reference, but for practical, cold, hard facts that you will need every day through the year, you must look elsewhere. To be up to date and to meet the demands of your patrons for efficient service, take the better ones of the independent medical journals and get the many small volumes from the pen of men who have made a special study of the subject upon which they are writing. During my experience of nearly twenty years in the practice of medicine, I have received more genuine benefit from the independent medical journal and from perusing the contents of a small volume from the pen of a practical writer than from all of the standard textbooks and state journals combined.

When first entering upon the duties of a physician, I thought all that was necessary for the business was two rooms for an office,

with the necessary furnishings, an operating-chair, a few instruments, an obstetrical bag and hand medicine-case, and a prescription-pad. However, within the first five years of practice, my views became very much altered and I found it absolutely necessary to learn a little more as to how the medical business should be conducted to make it more remunerative, by being able to do better work in the treatment of present patients, and how to secure new patrons.

Although I had no difficulty in handling the acute diseases with which I came in contact and had to prescribe for, I did encounter perplexities when meeting the ailments of a chronic nature. Drug medication did not produce results that were satisfactory to the patients or to myself; the length of time required to cure this class of diseases was altogether too long; patients became dissatisfied and went to some other physician; while the money received for the time spent upon the patient and the work performed was not adequate, and I lost a patron whom I should have been able to retain.

How to overcome this trouble was a problem, and it was several years before I arrived at a solution that was satisfactory to me. Owing to there being such an endless list of people who suffer from chronic ailments, I put in most of my reading-hours on this subject, and I have continued on these lines during all the intervening years, and expect to continue doing so as long as I am in the doctoring-business.

The first line of study that I took up entirely outside of drugs was medical electricity. After getting acquainted with the fundamental principles, I invested in a galvanic and faradic electrical cabinet. Later, I added a static and a high-frequency machine. This opened a field of treatment that was productive of certain results that were satisfactory both to the patient and to myself, and enabled me to make more money than ever before. I saw the patient more often; the results of treatment could be depended upon; the patient felt that I was taking more interest in him than under the old-way of drug medication alone; the length of time required to complete a cure was shorter; and, more to the point, I took in more money, and, moreover, it was paid with feelings of gratitude.

Electricity has been of the greatest benefit to me in the treatment of gynecological diseases, especially leucorrhea, disorders of menstruation, and the nervous phenomena of women. When once a physician knows

how to use electrical currents in the treatment of disease, he can accept patients with a certain knowledge of what to expect.

In diseases of men, my best results have been from treating those of sexual disturbances; diseased prostate gland, old chronic cases of gonorrhea, strictures, gleet, and so forth. In cases where ulcers are found along the urethra, I generally make direct applications, through a urethroscope, of a mixture of equal parts of tincture of iodine and alcohol, and follow with semiweekly or weekly applications of echinacea, belladonna, and nucelin.

Chronic constipation and hemorrhoids were another bugbear to me, and I looked around for some better modes of treatment than I knew of. While much may be learned about these diseases from the ordinary textbooks, nevertheless, I did not derive from them any better practical knowledge than I already possessed, and the greater percentage of this class of patients will not give up and enter a hospital for operation until every other available means within their reach has been tried and found useless.

I kept on the lookout for some treatise that would prove of more benefit to me in the management of rectal diseases than any work I had yet found, and was finally rewarded by purchasing Albright's "Rectal Diseases: Diagnosis and Treatment by Ambulant Methods." This really started me on the right track and enabled me to do good work in rectal cases at the office and without much discomfort to the patient. Every general practitioner should have a copy of this book in his library. The same author has issued a companion volume, entitled "The General Practitioner as a Specialist," and that should occupy space on every doctor's bookshelf.

My next line of special study was in the fitting of glasses. This has broadened my knowledge of the human makeup, but it has also been a channel through which many dollars have reached my pocket that otherwise would have enriched the traveling optician or gone to an out-of-town oculist. Besides, I get acquainted with people, in doing this work, whom otherwise I might not meet at all, and in this way am paving the road for future patients. The cost of the necessary refraction equipment is so slight, when compared with the dollars received from doing the work, that no one should hesitate for a moment to take up the study. This will apply especially to those doctors living in country towns and villages.

While the three lines of study enumerated have been of great importance in assisting me to become more competent to treat my patrons satisfactorily and at the same time to earn more money, there have been several minor features in addition that are responsible in a greater or less degree for my present efficiency. These will be mentioned jointly, so as not to make this article of needless length.

I introduced better system in my everyday work. This meant attention to regular office-hours; keeping appointments to the minute; promptness in responding to outside calls. When people could not or would not pay their bills, I simply told them to get another doctor. New patrons with whose financial rating I was not familiar were pointedly asked whether they were able to pay for the services, for, if they were not, I could not find it convenient to go and serve them. There may be a few doctors scattered over the country who do not care whether they receive pay for their services or not, but in all of my experience thus far I have yet to find one such person.

I made more careful and more systematic examinations of the people who came to me for medical advice and treatment. I keep a record of every patient that calls at the office and that I am called upon to attend on the outside. These records are kept in a small loose-leaf book, and, after making my notes at the bedside or in the office, I write them up at the earliest opportunity and have them on file for reference.

I became informed on the treatment of hernia by the injection-method; perfected my technic in adenoid and tonsillar operations; kept up on all minor surgical work and on such major operations as I might be called upon to do; procured a good microscope and all accessories; bought a complete urinary-analysis outfit, also one for chemical analysis of the stomach and bowel contents. I secured biologic specimens from any and everybody who came to the office or whom I was called upon to treat outside and made the examinations until I was thoroughly familiar with the technic of the different examinations, both chemical and microscopical. This has proved to be of great value to me in making correct diagnoses and in simplifying the treatment. A differential cell count in anemia is worth the price of a microscope; the treatment is resolved into accuracy, instead of guesswork.

Further, I purchased books that outlined the treatment of the foot and the removal

of hair and other facial blemishes. I supplied myself with all the equipment needed for giving hypodermics, the serums and bacterins, 606 and like remedies, and also for intravenous medication. This latter treatment is a wonder in selected cases and the results to the patient and the physician are simply marvelous.

I endeavor to improve my time, as years go by, in acquiring knowledge that will increase my status as a physician and public worker. I avoid all extreme positions on public questions, and before making statements before the public I study to talk directly to the point and in such a manner as to leave a desire with the hearers to want to listen to me again. I try to improve every opportunity that offers for increasing my business in legitimate ways. I treat my neighbor and competitor with fairness and courtesy, and expect, and demand, like treatment from him.

About half of the physicians whom I have met during the years that I have been in practice have been gentlemen. The other half have ranged, from out and out "stealers of cases" to the man who knocks you at every turn and has not the guts to come out in the open and meet you. Ethics, to them, is something to talk about, but alone for the other fellow to practice.

M. E. EASTMAN.

Weaverville, Calif.

[Doctor Eastman's article is an admirable one, and we hope that it may be an inspiration to many of our readers. He has shown how any able man can prepare himself to do better work, and thereby enlarge his income. His paper should be read by every discouraged practitioner, again and again, until inspiration and determination take the place of the lethargy, carelessness and indifference which are the greatest foes to success. We have in hand several other papers upon this general topic, some of which we shall try to print next month.—Ed.]

DOCTOR LAWRENCE'S ARTICLE ON CROUP AND IODIDE OF LIME

I have just read with interest Doctor Lawrence's article (December, 1914, p. 1061) on the treatment of croup. However I wish to take exception to his statement that practically all works on therapeutics fail to mention the use of the iodide of lime in the treatment of this disease. My point is this: In his "Medical Practice," under "Catarrhal

Laryngitis" (Spasmodic, or False, Croup), Ch. Gatchell, a Homeopath, names the first remedy "iodide of lime—the: rude drug, not calcium iodide—in 1-4 to 1-2-grain doses," and asserts that it "will cut short the attack in almost all cases." Under "Pseudomembranous Laryngitis (True Croup)," the first remedy mentioned in the same book is antitoxin, and the second is iodide of lime, 1-2 grain every fifteen to thirty minutes, with the statement that "in some cases this will cure if given at the beginning of the attack."

I think this is interesting, in that it shows the readiness of a Homeopath to accept a drug for its physiological action when this seems the best remedy. It is especially interesting in that it comes from a man of Doctor Gatchell's standing, who, for instance, has held the positions of secretary of the American Institute of Homeopathy, of professor of theory and practice at the Hahnemann Medical College and Hospital, of Chicago, of editor of *The Medical Era*, besides others.

DON H. SILSBY.

Ann Arbor, Mich.

[I have always found our Homeopathic brethren most receptive of new ideas—more so, I regret to say, than some of our own leaders.—Ed.]

HOW ONE MAN SUCCEEDED

In reply to your request to "just write," I will give you my testimonial of what somebody did for a doctor. Nine years ago, I started out from college with a determination to make a success of the practice of medicine. I had an office-outfit and \$200 in cash. I decided to go to the country for a few years, thinking that I should have a better chance to get business at once, and I selected a town of 2000 people where there were five doctors. I stuck out my shingle on the first of July. I stayed ten months and left \$400 of unpaid bills. In those ten months I did business to the extent of \$2250, and of this I collected \$250. The remainder still is due me. By this time I decided that I was in the wrong town. After some effort, I collected \$43 and moved to another town. This town was a little smaller than the one I quit, but the results were just as large. Third town ditto.

I then stored my equipment and went home to "visit" and to see if I could get into something that would make me a living. I was owing \$1800 and had a book-account

of \$5700, of which I have never collected a cent. On this home visit I dropped in to see the old storekeeper who had been in that town for forty years. He also is a good friend of mine. We had a long talk, and I told him my experience for the past four years. Said he: "Tom, you have had a heap of book learning and a right smart practice, but I reckon you don't know much about business. Now, Tom, I will make you a business proposition. You go over to Blanktown (a city of 25,000) and start in practice again. I will advance you \$500 at the rate of \$50 per month. If you make good, you pay me \$1000, if you fail, you owe me nothing; however, you must follow the directions that I give you." Of course, I accepted his proposition.

The next day my friend and I started for this town from which I write. Within two hours we found a dentist who had an extra room. We rented it, with the use of his reception-room, for \$11 per month, the rent to start the first of the following month. We next visited the business men's association, of which I at once became a member. I was supplied with a list of the "slowpay" and the "deadbeats" of which this town has the average quota. After seeing the editors of the two local papers, we drove back home for dinner, 20 miles. The meal finished, my friend looked over the credit list and said: "There are a heap of D. B.'s in that town, but you have done enough D. B. work for a while. Let's see what you can do for yourself. This list will be the guide-post to success."

And here are the instructions he gave me, which I have followed to the letter, since I had nothing to lose and everything to gain:

"When you get a call," the advice ran, "ask the name and address, retire a moment and look at the list. If the name is there as a D. B., return and tell the gentleman that you can make the visit for \$2 cash. If he is one of those fellows who pay for the first service and never afterward, he will pay. Go and make the call; then, if you find that the case will require further calls, say, three, tell the man so, and that you will make the three calls for \$5 cash now or for \$2 cash each time you come. If he has not the money, take an order on the firm for whom he works. Hold this order over one payday, giving him a chance to pay you; if he does not, then collect the amount from the employer.

"If the man is one of those that never pay at all, he will get angry and give you a

strong talk about his honesty. Tell him that he is on the list as a person who does not pay his bills and if he wants your services he will have to pay cash, but you will make a visit for \$1.50 cash at each visit. If you do work for him, make him pay every time, else you will lose, not alone a bill, but a patient to boot. If he is listed as slow pay, go and do the work and present the bill at the end of the service, with the statement that you will give a 10-percent discount for cash today, and that you do not carry any account for more than thirty days. If he does not pay in thirty days, take a secured or a judgment note."

For the rest: "Buy only what you actually need. Do not buy on credit. Pay cash and get the discounts."

On the first of the month, I opened my office for business, and had a call on the first day. (On my first visit to this town I saw the newspaper editors and paid for the notices.) My first caller was at the very head of the deadbeat list. The fellow got mad and has not spoken to me since. My second caller also was on the list as a deadbeat, but I got out of him \$4.50 cash for three visits. Next was a slowpay. From him, I got \$8 cash for five visits. Next I got an order from a slowpay. Next was a case of gonorrhea: got \$10 down and \$5 each week until cured. Next was a confinement: got \$15 cash. (Our regular fee is \$25.)

All of my callers the first month, except one, were on the list as deadbeats or slowpays. I did business with 40 percent of them and took in \$66.50 cash. Of the \$50 I borrowed at the start, I had used \$48, and that was the last money I borrowed. At the end of the fourth month, I paid my merchant friend for the \$50 I borrowed and \$10 for his trip over here the first day. I have never borrowed or bought on credit since that time, and have paid up the \$1800 I owed when I came here. I keep an account of all business transactions, which, for 1914, was as follows: Cash, \$5567.50; balance, on books, \$295; charity, \$204. I never turn away any honest poor applicant, but the D. B. can get no credit here, therefore, he does not beat me.

I am just an average doctor, probably not even up to the average, but I was no better doctor when I came here than I was in the town I last quit. I am still using the rooms with the dentist at \$11 per month. This system of business has worked well with me, as also with several others whom I induced to try it. One doctor was about

I think there are many doctors and dentists in small places who could use this "scheme" to their mutual advantage. As for the equipment, we had enough furniture between us to fit the office-rooms up very nicely. We covered the floors completely with linoleum, which makes it comparatively easy to keep them clean. There are no pictures on the walls of the reception-room—only a large mirror. We have a good-sized table for papers and periodicals and a small one for the lamp, two large easy chairs, and four good common chairs; also a cloak-and-hat rack. On one side of my medicine-room I have glass cases for my drugs and sundries and a table supporting shelves for my books. I have my diploma and certificate on the walls of this room, but no pictures. In the private room, besides my operating-table, I have a table that I use as a washstand and another on which I keep various articles for which I have frequent use. No pictures here. A large stove in the waiting-, or reception-room, and a small one in my private room heat the apartments.

If you think this will prove of benefit to your readers, you are welcome to publish it.

A. H. BISHOP.

West Bend, Ia.

[We have several more of these articles on hand for publication next month. I think you will all agree with me that these stories of actual experience are just what we all need. It is easy enough to paint glowing pictures of what the doctor *should* do; but it's quite a different thing to actually *show* us. What has the next man to suggest?—ED.]

SHALL THE PHYSICIAN BE COMPELLED TO INFORM HIS PATIENTS AS TO THE IDENTITY OF MEDICINES DISPENSED?

In the last number of *CLINICAL MEDICINE* (see page 7, January issue), we asked our readers to give us their attitude toward the passage of laws which would require every physician dispensing medicine in person to write a prescription for this medicine, said prescription to be placed in the hands of his patient. The same request for comments upon legislation of this kind was made in a personal letter addressed to a number of prominent physicians in different portions of the country, representing different schools of practice, and including medical editors, officers of medical societies, health-officials,

and well-known practitioners of wide experience. As previously explained, this request for an expression of opinion was suggested to us by a gentleman who is very prominent in pharmaceutical circles, and who is anxious to sound the feeling of the medical profession without himself being drawn into the discussion.

We have been surprised at the multitude of responses. Judging by the number and the heat of the replies, the issue is a live one. In truth, we have received so many letters that it will be possible for us to print only a portion of them, while we are obliged to cut down the length of quite a number on account of the limitation of available space, as well as to eliminate matter which seemed to us rather too bitter or irrelevant.

It was not, and is not, our purpose to "start something" on the dispensing-question. As we have so frequently said in these pages, the answer to the query, shall I dispense or prescribe? is one that every practitioner must work out for himself. There are many factors to be considered by the doctor, but the paramount one is the interest of his patients. If this interest can best be served in his community, and with his clientele, by prescribing, then his duty is plain; and, if he can give better service by dispensing his own remedies, then no outside factor should deter him from so doing. But, he himself must be the judge, and certainly the last person to dictate to him his method of practice is one who would gain or lose financially through that decision.

We have been particularly anxious that the question proposed for discussion here should be dealt with on its merits alone, and absolutely without expressions of unfriendliness toward our friends of the pharmaceutical profession. We have been glad to feel that a friendlier feeling was growing up between druggists and doctors, and we have helped this feeling along as best we could without sacrificing what we believed to be our duty toward the medical profession. The physician has rights which should be conserved, and, with others, we have been and are willing to fight to the limit of our strength for the preservation of those rights. We have no ulterior motives as regards the druggists, and we are utterly opposed to any attempt on the part of the medical profession to make legislative trouble for the druggist. So far as we know, there is no such effort, and there should be none.

Attempts to injure others, like chickens, "come home to roost." Therefore, it is

peculiarly to be deplored that there is a certain element in the pharmaceutical profession which is vociferously and persistently demanding that "something shall be done to the dispensing doctor." Few flies are caught with vinegar and few friends are made by threats and abuse. Talk of this kind is doing harm to both professions. Therefore, we say plainly to these men: "You are on the wrong track; it will not pay you to follow it."

There is no good reason why all good doctors and all good druggists should not be on friendly terms. There are the best of reasons for cultivating a more friendly relationship between the two professions, one in which each shall recognize the difficulties of the other and leave each to work out its own problems.

Medicine is going through a transition period, and such periods are times of trial. Much, however, has been accomplished. The educational advance has been tremendous; there is a general cleaning up all along the line; and, what is of most importance, there is a great ethical awakening. Pharmacy's problems thus far have been more largely economic; but the ethical and educational issues are likely to require much more attention within the next few years. If she gives these problems the attention they deserve, she will have little time or occasion to undertake the reform of the medical profession.

In a recent address before the St. Louis College of Pharmacy, Professor James H. Beal pointed out the dangers of the present excess of zeal for legislation as a panacea for every ill. Read the editorial upon this subject in this issue of *CLINICAL MEDICINE*. We want to quote at this place from an address which Professor Beal delivered June last before the North Carolina Pharmaceutical Association:

"The wrong use or misuse of a drug is always more widely advertised than its proper and lawful use. The countless thousands of cases where drugs are properly and beneficially employed are never heard of, while the comparatively few cases of misuse are heralded far and wide, until the reading public is led to believe that such misuses are of constant and regular occurrence; a situation which affords the savior-of-the-race-by-legislation reformer the opportunity he most delights in, and serves as the excuse for the composition of bills which would either totally prohibit the sale of useful drugs or else impose such restrictions upon their sale

as to amount in fact, if not in name, to practical prohibition."

Substitute in the preceding the word "dispensing" for the word "sale," and the significance of the proposed legislation under discussion becomes apparent. In another place Professor Beal says:

"It is undeniable that a certain percentage both of doctors and druggists have been interested in the illegitimate traffic in habit-forming narcotic drugs, but it is monstrously unjust to charge either doctors or druggists with general participation in such traffic. It is only the exceptional physician who is careless in the prescribing or dispensing of these drugs, and only the exceptional pharmacist who desires or encourages the patronage of habitués."

And finally:

"We are piling statute upon statute, adding bureau to bureau, and official to official, until the liberty of individual action and the responsibility of the citizen are becoming obscured in a maze of artificial duties and scheduled prohibitions. For morals, we are beginning to substitute the provisions of statute law; and for the dictates of conscience the artificial rulings of some bureau official. The American people have become possessed of a perfect fury for legislating. No matter what the difficulty, whether of a particular class or of the body politic, whether economic, social or moral, whether the temporary difficulties arising from the changing forms of industry or commerce, or the permanent difficulties due to the inherent qualities of human nature, the first and almost the only thought is, to appeal to the law-making bodies for relief."

It is interesting to note how many of the contributors to the symposium which follows take exactly the position so clearly set forth by Professor Beal.

Our final admonition is, to watch the legislatures. To be prepared for the introduction of bills unfavorably affecting the interests of the medical profession is the best insurance against economic and financial disaster from this source. If the profession is awake it is safe; if it is asleep, then anything may happen. Keep awake!

Is There an Ulterior Motive?

To the Editor: Replying to your query with regard to the enactment of bills designed to compel physicians to inform their patients concerning their remedies, I wish to say that it seems incredible that any law-maker would for a moment consider such a proposition. There are a few patients who are intelligent, to whom no harm would come,

but the ignorant, the hysterical, and inquisitive ones could not possibly be benefited; rather, more or less harm would be done by such information, in a great majority of these cases.

It, further, seems incredible that law-makers can be made to believe that so much legislation concerning the administration of remedies to patients is necessary. It is very doubtful whether anything but harm can come from so much legislation. It should be plain to these men, especially if they are experienced, that there must be some ulterior reason why individuals are so anxious for legislation of this kind.

FINLEY ELLINGWOOD,
Editor, *Ellingwood's Therapist*.

Chicago, Ill.

It Would Be Distinctly Unwise

To the Editor: I think any legislation whereby a physician is required to inform a patient as to the nature of medication he is receiving is distinctly unwise. Some patients can be aware of the line of treatment a physician is following without any detriment to him, but it would be distinctly harmful to those of the neurotic type to have any idea as to the therapeutic measures in use in their case. The laity have certain definite ideas about certain definite drugs which are widely at variance with the facts, but they possess these ideas, nevertheless, and, if, in many instances, the physician were to prescribe a particular remedy concerning which a given patient had some mistaken impression, it would be difficult to make that person realize that this particular agent was indicated in his condition. The intelligent layman is quite content to place his case in the hands of the intelligent physician, and to allow a medical man to treat him as his judgment dictates.

I can see no occasion for any interference with the physician's prerogative in the matter of dispensing or writing prescriptions. Such meddling is entirely unwarranted and will only result in trouble to the patient. There is altogether too much "reform" in the air at the present time. If our legislatures would put no new laws upon the statute-books for a few years, but insist upon better observance of those laws we now have, the country at large would be better off. People who live by the Golden Rule have very little to worry over so far as the practice of medicine, pharmacy or any other vocation is concerned.

H. S. BAKETEL,
Editor, *The Medical Times*.

New York, N. Y.

Is It an Intimation of Incompetence?

To the Editor: Your request for opinions as to dispensing physicians issuing prescriptions to patients whom they serve is, I take it, to get the opinions of the profession in their own language, and not that you have any doubt as to what it would be.

The laity knows nothing about a prescription and cares nothing about it; if, however, they had it, they might be tempted to take it to the drug store to have it refilled or imitated. For that reason, doctors should not write prescriptions. I always keep copies of important prescriptions, for reference. To me, the effort in question is a strong intimation that the medical men, as a class, are incompetent; but, then, neither of the two professions should make such an accusation against the other, lest they forget their own shortcomings.

However, it would be a good idea to conduct a department of pharmacy in the A. J. C. M. Also, the medical profession should insist that pharmacists qualify before being allowed to prescribe, whether it be "Bull's Balsam for Bad Babies," or anything else.

J. E. GRAY.

Butler, Ohio.

Let the Doctors Keep the Record—Not the Patients

To the Editor: Any law calculated to force practitioners to give a prescription with any medicine given a patient, in the interest of druggists, is to the disadvantage of the public and the physician. I am teetotally against any legislation which will in any way interfere with the doctor's prerogative to furnish anything he finds his patients need for the relief of their suffering and to effect a cure. I wish right here to thank THE CLINIC for the assistance it has rendered the profession and to urge it to continue this good work.

Every doctor should keep a record of what he dispenses to his patients, whether it be on history-blanks or in a prescription-book, for his own benefit, so that when his patients return he will know what medicine he has given them. In no case, and under no circumstances, should the patient be given a prescription in addition to the medicines.

I have been practicing and dispensing for almost eight years, and have been asked only twice for a prescription, and that was for whisky. I told them, since they had made their own diagnosis and selected the remedy, it was up to them to secure it in any way they could, as I was my own judge as to what I dispensed or prescribed.

I have talked the situation over with several of my patients and not one of them thought it would do to stop the doctors dispensing, as that practice is more satisfactory to them.

I have had patients tell me they could not take certain drugs; but I gave them the very thing, without their knowing it, and I secured the expected results. Had I given them a prescription along with the medicine, they surely would not have taken it. It would not do to give a patient a prescription along with codeine or morphine, as it is always best that people do not know that they are taking those drugs.

C. O. NELMS.

Herscher, Ill.

Would Discommode the Country Doctor

To the Editor: I am bitterly opposed to any and all legislation that antagonizes the dispensing of medicine by the physician, as I feel that it would discommode the people of the rural district in which I am a practitioner.

S. W. THOMAS.

Lacona, Ia.

Would Not Safeguard Patient's Interests

To the Editor: In our town, most of the physicians write prescriptions in the office, but in the country we dispense. I personally keep on file a prescription covering all medicines I compound for my patients. Quite a larger percentage of the prescriptions taken to the various drugstores are compounded by unlicensed clerks. It would seem that a physician who has the burden of his patient's recovery at heart would not go far wrong

in preparing such mixtures as they might need, and should be hampered in his care of such patients just as little as possible.

A copy of these prescriptions left in a patient's hands could in on way safeguard his interests, and might be productive of harm. It would favor passing prescriptions along. Most people do best when they are ignorant of the nature of the medicine they take.

Waukon, Ia.

C. W. ROMINGER.

Too Many Laws to Regulate the Medical Profession

To the Editor: As to my opinion with regard to a law, requiring physicians to hand patients prescriptions for medicines dispensed, I will say that I am opposed to any such law. In fact, I am opposed to the multiplication of laws for the regulation of the medical profession.

W. B. HAGER.

Nashville, Tenn.

Shelve the Class Legislation

To the Editor: Recently I encountered a professional man of considerable note who is extensively using the emetine treatment for pyorrhæa alveolaris, and he is charging his patients \$10.00 "for material," besides a very large fee for "services." It is this sort of thing which is creating a demand that physicians acquaint their patients with the drugs they personally use.

Not long ago a poor patient complained to me that a distinguished oculist in another city demanded \$15.00 to replace the broken lenses in a pair of spectacles he had not long before supplied at a very high price. But a letter brought the prescription from the oculist, and the new lenses cost fifty cents. This patient now patronizes an optometrist, who, incidentally, is active in the fight to get a state board for the optometrists.

The medical profession has itself very largely to blame for legislation aimed against it. Someone, when being offended, said: "No gentleman would insult me, and no other man can." And the medical profession assumed that no scientist would hurt it, and that no other man can. So, the profession, meaning all right but having no political vision at all, secured its own snug little legislation, forgetting that the "other man" could, and would, play at the team game. And the "other man" has been playing it to such purpose that it is now a fight to the finish or a compromise. If a fight to a finish, the man who knows how best to play politics will win. Needless to say, that will not be the physician.

The unfortunate fact faces us that we struck the first blow. We may just as well admit it, for we did. And we are in for a licking that we deserve. If modern medicine cannot sustain itself on its merits, without everlastingly rushing to the protection of class legislation under another name, then there is something wrong with modern medicine.

Just so long as a certain class of physicians are hissing the law upon the pharmacist, just that long will the pharmacist get back in kind.

I may be pessimistic, but my text in this matter is this, if I may paraphrase a bit: Agree with thine adversary quickly, whilst thou art in the way with him; lest at any time the adversary deliver thee to the legislature, and the legislature deliver thee to the politician, and thou be made

a lawbreaker; and thou shalt by no means escape until thou hast paid some board the uttermost farthing.

Practically, then, as I view it, the leading medical men and pharmacists should get together and shelve permanently all manner of legislation and proposed legislation aimed at each other. The public will not object, for they have no interest or care in the matter, since they know very well that practically none of this class legislation protects the public interest.

THOMAS S. BLAIR,

Editor, *The Medical Council*.

Philadelphia, Pa.

Every Physician Should Fight

To the Editor: In the January number you ask for the opinion of physicians concerning a proposed law requiring doctors who dispense to leave with patients the prescription of the drugs given him. As for myself, I consider that it is one more attempt to saddle the physician with an additional hardship for the benefit of the pharmacist. Every physician should fight this bill to the last ditch.

S. W. SAUNDERS.

La Plata, Mo.

If Needed, Let Physicians Draft the Laws

To the Editor: That there should be stringent laws regulating the sale of the various narcotics and habit-forming drugs, no one will deny; but such a law should not be made without all due consideration of the true needs of the people.

While personally I dispense very few drugs, it has always seemed to me the height of folly to license a man to practice medicine and then take from him his armamentarium.

Before framing a law, either state or national, it would be wise to ascertain the necessity for such a law as contemplated and who would be benefited through its enactment. This would also include ascertaining who are the violators of the code.

Such a law as you refer to presumes that physicians are both incompetent and culpable, and that many addictions are attributable to the dispensing by physicians. This, I believe, is not correct. The accommodating and meddling laity and the obliging druggist have made more drug-slaves than all other agencies.

While such laws, if enacted, in conjunction with a law, equally stringent, regulating the sale of narcotics by druggists, would prevent many of the drug-addictions, such legislation at the same time would work an extreme hardship on many invalids actually suffering, and lives actually would be lost in consequence of such stringent regulations.

To place in the hands of the masses prescriptions calling for morphine tablets, will produce more morphine users than will any other methods. If it is necessary for a patient to have morphine, it is far better for that patient to be given the drug in ignorance of its name. What benefit may a patient derive from knowing the drug he is taking, when he knows nothing whatever of its therapeutic values? Many times it is distinctly advantageous for the patient not to know what he is taking or what results we expect to derive from the use of a drug.

The contemplated bills include the prescribing or dispensing of all drugs, but there can be but little argument concerning any, except the habit-

producing narcotics and other highly poisonous drugs.

When a bill of this sort is drafted, it really would seem logical that the medical men should construct it. Moreover, that it should not be the work of one man nor of one group of men, but should be what the profession as a whole thinks best.

Such a symposium as you propose publishing will aid greatly in determining whether or not a bill, such as is contemplated, is a necessity, or whether it is for the benefit of a special class.

CLYDE D. PENCE,
Editor, *Illinois State Medical Journal*.

Chicago, Ill.

A Homeopathic Objection

To the Editor: The editor of *The North American* has been requested to contribute to a symposium, to appear in *THE AMERICAN JOURNAL OF CLINICAL MEDICINE*, dealing with the advisability of compelling a physician to give to his patients the names of the drugs he is dispensing to them; there being presumptive evidence that bills to this effect are to be introduced at the instance of the druggists' associations in a number of legislatures.

Legislation of this nature evidently would be aimed at physicians who do their own dispensing, so that the discussion of this question is eminently appropriate, not alone in these columns, but in *The North American Journal of Homeopathy* as well—which will be done in its next issue.

There is not a homeopathic physician who will not oppose such legislation, if it is brought to his attention. The great majority of the medicines dispensed by homeopathic physicians are of such a character as to render them not dangerous to the life or health of any person accidentally mis-using them; so that there is no call for a safeguard of this character on this account. We are confident that homeopathic physicians having occasion to dispense medicines that did not conform to this rule have intelligence enough and take sufficient interest in the welfare of their patients to give such directions for the handling and use of the medicine as the case may call for.

On general principles, it might prove a very dangerous thing to acquaint a patient with the name of the drug being dispensed. The patient might be aware of its poisonous properties and might deliberately take an overdose; or, an overdose might be deliberately administered by a member of the household.

If anything can be gained by letting the patient know the name of the remedy prescribed, the physician can be trusted to impart the information. To give the name of the remedy to some patients, would be a suggestion to them to read up about that drug in some encyclopedia or other authority and thus perhaps cause them to apprehend that more is the matter with them than the physician says or even to question the appropriateness of the prescription.

Again, such a practice might lead to self-drugging. Knowing, for instance, that the last time he had "rheumatism" the doctor gave him rhus toxicodendron, the next time "rheumatism" strikes him or any member of the family, he is likely to send to the drugstore for rhus toxicodendron. This will always work to the profit of the druggist, but by no means always benefit the sufferer.

Granting, as we must, that the interests of the patient must be preeminent, we cannot see how they can be served in any way by such legislation as is suggested, and we have shown that they may be harmed thereby. *The North American* certainly will expect every legislative committee of every state homeopathic society to oppose strongly any such measure.

HILLS COLE,
Editor, *North American Journal of Homeopathy*.

New York, N. Y.

Better to Legislate Against "Patents"

To the Editor: I have received your letter of January 7th, requesting my opinion concerning the justifiability of legislation "to compel physicians to acquaint their patients with the name and character of all medicines which the doctor may personally administer or dispense, the physician being required to place this information in his patient's hands, by 'prescription' or otherwise."

I do not dispense, but my practice is, as you will see by the enclosed printed prescription head, to have a copy of the formula placed upon the package. I do this for my own protection against error on the part of the pharmacist, and also for my information or the information of a colleague who may be called in an emergency to treat my patient, in the absence of a case record.

This, however, is an individual practice, and there is no reason why it should be imposed by law upon those whose judgment is other than mine.

In certain cases, also, I hold myself at liberty to strike out from my prescription head the order to copy the formula on the label, for two reasons: First, that the patient may *not* be "acquainted with the names and characters of the drugs" contained in the prescription, and second, that it may not be renewed indefinitely by simply carrying the bottle to some other pharmacist than the one who originally compounded the medicine, and who therefore has not on file my original prescription, which states: "Do not renew."

Much harm results from indiscriminate and indefinite renewal of prescriptions, and from the advice of one patient to another to take this, that or the other medicine which "my doctor gave me." Patients who are likely to indulge in advice-giving or renewal should not know what they are getting; patients who are likely to contract a habit should not know when a habit-forming drug is prescribed; patients on whom an undesirable mental effect might be produced, also should not know what medicine they are receiving. It is a matter entirely for the discretion of the prescriber, and the law should not interfere. On the other hand, if a patient *demand*s to know what medicine is given him, he is within his legal rights; and it is then "up to" the prescriber either to inform him, or frankly to decline to inform him, saying, "I think it best not to tell you," or words to that effect. The patient then has the option of accepting the physician's decision or of seeking some other medical adviser; and the physician is well rid of any patient who leaves him under such circumstances. The same principle applies, of course, when the physician dispenses.

Legislation, far more imperatively needed, is an act to compel "patent medicine" manufacturers to "acquaint purchasers with the names and character of the drugs contained" in their

products by printing a true and complete formula on the label of each package.

In the case of the physician the patient has to depend upon the skill and probity of the prescriber (or dispenser); and has a remedy at law in the case of malpractice. In the case of patent medicines he has no such dependence and no remedy.

In other words, there is an element of personal responsibility in the first instance; but none such in the latter instance. The law should interpose its safeguard where there is no personal responsibility—in the case of the patent medicine; its protection is not needed in the case of the physician.

S. SOLIS COHEN.

Philadelphia, Pa.

Look Out For the "Interest" Behind Class Legislation

To the Editor: You ask your subscribers for short, pointed opinions regarding the alleged desire of certain pharmaceutical journals and societies who wish "to protect (?) the people of this country" from "the carelessness or ignorance of the attending physician" who dispenses his own remedies, and aim to get laws passed which will require all such physicians to place prescriptions in the hands of their patients showing the remedies which they have given them.

However, it seems impossible to do this subject justice in a short letter. As a matter of fact, the efforts of the various interested corporations, professions, and individuals to pull the wool over the eyes of our legislative bodies and have them enact laws for their own special benefit, under the pretense of working for the interests of the common people, are becoming altogether too numerous and an actual threat to the general public.

I am one of those dispensing physicians, and I should like to know how a prescription in the hands of my patient is going to protect him from my carelessness or my ignorance, unless he takes it, along with the medicine I have given him, to one of our pharmacists and asks him whether the medicine furnished is the same as that which the prescription calls for or whether it is a substitute; whether it is what he needs for his ailment, or not; whether it is a poison that will kill him if he takes it or whether he had better throw it away and get some patent or proprietary medicine from the druggist in its stead. I should like to know whom the patient is likely to find more competent to pass judgment, as to what he needs, than the doctor, who has complied with all the laws which the legislators have passed to protect him from incompetents.

A prescription in the hands of a patient can do him no good whatever, unless he desires to get it filled by a druggist or some other doctor. However, a prescription kept on file by the doctor who dispenses his own remedies would be a convenience to the doctor himself and a benefit to the patient, in case it became desirable to recall what had previously been dispensed.

You certainly have struck the nail squarely on the head when you say: "The underlying reason is, undoubtedly, a desire on the part of the druggist to strike a body-blow at the dispensing doctors." Such a law, if enacted, would require every doctor, in every case of emergency, to leave prescriptions with every patient, telling him just what he had given him, even when he had to give hypodermics

for the relief of pain, syncope, mania, or other acute condition.

Such a requirement would be disastrous to any community, instead of a benefit. In such instances, the doctor often would feel forced to lie about what he had done, to avoid being condemned by an incompetent jury of friends and neighbors, as well as being criticized by the druggists. Under such circumstances, the incompetent public would soon consider themselves more competent to judge what the patients should have or should not have than the attending physician. The result would be one hundred percent more malpractice suits than we now have, and doctors would soon become so disgusted and so harassed that they would seek other vocations and let the people treat themselves, or let the druggist, the patent-medicine vendor, the Osteopath, the mental healer or magnetic healer, or for that matter, the legislature treat the sick. Such an insensate law would, indeed, be a body-blow to our profession.

I am aware that the same charge is often made against the medical profession, and, while no doubt there are some instances wherein the charge can be substantiated, we know that as a class there are no more self-sacrificing, well-meaning men, desirous of doing everything in their power to benefit society, than the members of the medical profession. However, if any more laws can be enacted, tending to drive us out of business under the pretense of "benefiting the public," some subtle lobbyist no doubt will get the ear of an ambitious, shallow-brained legislator and have the necessary bill drafted, and, watching for an opportunity when barely a quorum is present, will have it railroaded through.

The question of really benefiting the public is the last one thought of or the least considered in the enactment of many of our laws today. There is a subtle imp hiding under the cloak of "benefits to the public" in about nine cases out of every ten of the bills presented before our law-making bodies, which is nothing less than a selfish desire for financial gain on the part of somebody. Every legislator in our land should examine every bill and every amendment offered and see whether there isn't some diabolic personal interest back of the plausible arguments.

O. J. RUTH.

Colchester, Ill.

Such Knowledge Bad For Patients

To the Editor: Personally I consider it a bad thing for many patients to be familiar with the drugs they are taking. They get in the habit of reading the doctor's prescriptions and if he orders the same drug twice, or several times, they take exception to it, and sometimes lose confidence in his knowledge. Further, not a few patients—women, especially the young and unmarried ones ("old maids")—fuss over all their ailments, even the lightest, and become introspective and morbid, often about mere nothings. In the same class frequently are clergymen, and even nurses and doctors themselves. The latter class, however, very infrequently especially among general practitioners, who haven't the time or the desire to bother about their own bodies. Nobility obliges them to think of others' ills, and not their own—but, such are the heroes of the world, as I believe.

Again, many of the new drugs, often very injurious, are put into prescriptions simply because the doctor gets a reputation in this way for wisdom

among the foolish, increases his clientele thereby, and gives a sop to his conscience, if he has one.

The answer of such a man to the query, "Why did you prescribe a drug of which you know very little practically and when you know another, time-honored, which would be useful, or at least not harmful?" probably would be, because it is the way of success.

Alas, the pity of it! I claim that, in general, it is preferable for the doctor to write no prescriptions which can be read by the patient and by some peddled about among their friends. In confidence, the physician has the greatest bulwark in practice, and, if the patient has not this confidence in his physician, the sooner he goes to another the better for him and the doctor.

When all is said, it finally comes to a question of character and knowledge. If the physician's integrity is beyond cavil, if his education, opportunity, and experience are what they should be, then, and then only, should he succeed and win both friends and patients, at the same time. If the doctor be a knave, a pretender, an ignoramus, what not, it doesn't matter a great deal how one legislates or tries, fraud always will triumph for a little while; that is, make filthy lucre and secure temporary plaudits from the crowd of gulled ones.

BEVERLEY ROBINSON.

New York, N. Y.

It Would Foster Self-Medication

To the Editor: In reply to your inquiry, I wish to state it as my opinion, that, to demand that the physician give to the patient information about all the ingredients of the medicines he is giving him, would be a most pernicious piece of legislation.

You know very well that, as a rule, I am opposed to secrecy, but there are thousands of instances where it is best for the patient not to know just exactly what he is taking. A little knowledge is a dangerous thing, and numerous patients have peculiar ideas about certain drugs, knowledge derived from the reading of unscientific or quack literature, and with this half-baked knowledge they would either refuse to take certain drugs that are distinctly indicated in their cases, or even, if taking them, they might fail to be benefited by them, because they would take them reluctantly and in fear. It occasionally happens that a patient had taken a drug by which he was harmed; he then gets a prejudice against that drug and refuses to take it in conditions where it is absolutely necessary that he should take it.

We sometimes have patients come to us and tell us: I want you to treat me for this and this trouble, but you must not give me this and that drug. When a doctor is independent, as I am, he simply tells the patient: "You will take just what I am going to give you, if you want to be treated by me. I am the sole judge of what is good or bad for you, and I can treat you only on the condition that you put yourself entirely in my hands." But some doctors cannot afford to be so independent with their patients, and they either must avoid administering medicine which in their opinion would be beneficial, or else they must administer the drug disguisedly, stealthily.

Then, again, forcing the physician to disclose to the patient the nature of every ingredient he is taking would be the *best means for fostering self-medication*.

All in all, such legislation would be pernicious and a step in the wrong direction.

I believe in frankness and openness between patient and physician, but the physician's hands must not be tied. He must not be forced to do things which in his judgment are best not done. Just as in many cases we, for the good of the patient himself, are obliged to conceal his true condition and diagnose his case as something less serious than it really is, so there are conditions in which it is better for the patient not to know just exactly what he is taking.

Anyway, the patient's knowledge of the ingredients of his medicine is of little value, because all he would know about it is the name. As to the real physiological effect, he would be absolutely in the dark, and by looking up some popular works on medicine he would derive perverted, half-baked knowledge. About medicine, it certainly is true that a little knowledge is a dangerous thing, and often worse than no knowledge at all.

WILLIAM J. ROBINSON,
Editor, *The Critic and Guide*.

New York, N. Y.

Should Be Killed on Sight

To the Editor: "Shall physicians be compelled by law to acquaint their patients with the name and character of all medicines which the doctor may personally administer or dispense?"

There is no objection to telling some member of the patient's family the name and character of any remedy utilized in the care of the sick; however, anyone versed in the principles of psychology would recognize at once the unwisdom of making this announcement in routine fashion to the patient.

If the proposed bill emanates directly or indirectly from drug organizations and their journals, immediately there arises the suspicion that it is a trade-measure. Undoubtedly there are physicians who are inexcusably ignorant of pharmacology. But there are just as many unscrupulous druggists and drug-clerks who do not hesitate to substitute, or to give snapshot prescriptions, with equally mischievous results.

If the ultimate purpose of the legislation is, to limit by law the physician's right to dispense his own remedies, the legislation should be killed on sight. Such legislation is taking from the physician an important responsibility—that he take more than ordinary precaution to supply pure drugs in safe form.

SARAH M. HOBSON,
Secretary, American Institute of
Homeopathy.

Chicago, Ill.

We have received many more letters which we lack the space to reproduce. In the main they repeat the arguments presented herewith. In this connection we wish to refer to a letter received from Dr. C. F. Taylor, editor of *The Medical World*, who refers to the fight he is putting up in behalf of the dispensing doctor as to his position on the subject under discussion here. Every doctor should be reading the *World* during these strenuous days.

There is one point that seems to have been overlooked, in the main, in this symposium.

The main reason given by the druggists for advocating legislation of the character under discussion is that there may be actual danger to the dispensing doctor's patients because of the absence of any *check* (such as it is asserted that the prescription on file at the drugstore affords) against the incapacity, carelessness or criminality of the physician when he dispenses his own remedies; they also allege that dispensing doctors are prone to purchase cheap drugs, through cupidity or ignorance, and that there is no *check* against the quality of these drugs, such as the pharmacist is supposed to afford. The charge has also been repeatedly made that dispensing doctors are generally "cheap" doctors, and, hence, need "checking."

These charges are readily answered, and, to us, seem unworthy of a great and useful profession like that of pharmacy. Better relations between doctors and druggists can only be brought about by mutual confidence on the basis of better *service*. We agree fully with Doctor Blair, that "the leading medical men and pharmacists should get together and shelve permanently all manner of legislation and proposed legislation aimed at each other." Also, those "leading" men should know and interpret the feeling of the mass.

We have devoted a good deal of space to this discussion. Does it deserve it? We leave the decision to our readers.

FIELD NOTES FROM ONTARIO

I find a great many useful, practical suggestions in *CLINICAL MEDICINE*, many of which I have applied in my practice with satisfying results. *Our* journal is certainly full of good things, and I read it from cover to cover every month. I particularly like the short, breezy articles embodying the experience of the busy doctor. Having been helped, I want to give help, so here are a few points which have been useful to me and may be useful to some of my brethren:

Chilblains.—I saw the statement made some time ago that a saturated solution of zinc acetate in water, applied to the affected parts three times daily, would give relief. I tried it, and the result was immediate benefit following a single application and quick cure after a few days' use. Subsequent experience equally favorable. To me this seems another specific; therefore, I say: Forget everything else and use it. It is simple. It works.

Obstinate Constipation.—On page 1025 of the November, 1914, number of *CLINICAL*

MEDICINE, Dr. Robert Gray recommends injecting into the rectum a mixture of glycerine and water (2 drams each). A common male glass urethral syringe is used. I use this quantity for young and old, and have found it a much more convenient method of emptying the bowels quickly than by the enema of soap and water.

In severe cases of obstinate constipation, with fecal impaction, I have injected a quart of common coal-oil (kerosene)—the kind commonly used in lamps. This has never failed to produce results. In one case it took an hour and seven minutes to get the quart of oil into the bowel—but it did the work.

H-M-C.—This is a boon to the suffering, as well as a great help to the doctor, and I find it to do everything claimed for it. I no longer think of giving morphine alone when some remedy for the relief of pain is required. *H-M-C* is the best remedy available. Also, it is certainly good in obstetrical practice.

Keep on with your good work, ye editors, and may you be spared for a goodly number of years yet to continue the work you are doing to help the busy doctor and suffering humanity.

M. G. RIGLEY.

Peterboro, Ontario, Can.

A PERSONAL EXPERIENCE WITH EMETINE IN PYORRHEA

Emetine hydrochloride—there is nothing like it in pyorrhea, and it does not take weeks or months for it to make you believe in its efficiency. I am now using it on myself, and after the third day the soreness disappeared from my gums like clouds on a summer day. Now, the surprise was not only in the clearing up of the pyorrhea, but that at the same time my rheumatic pains left as though I had taken opium—less the slumber, except nights, which reminded me of my childhood days, for my sleep at last was peaceful and restful. I have not arisen in the morning feeling completely rested in twenty years until now, since beginning to take this remedy.

All my life I have had a chronic laryngitis, and when it began to cloud up for rain I would begin to cough and have aches. For the past three weeks, it has been raining most of the time, but I have been free from my former experiences of aching and coughing. I cough some, but it does not keep me up at night, as formerly.

When attending the New Orleans Polyclinic, I was taught that an acute attack of tonsillitis was a premonition of an attack of rheumatism. Can it be due to amebas? Let us try emetine as a specific in tonsillitis. Most rheumatics I see have pyorrhea, but not all persons having pyorrhea are rheumatics. They may be in some initial state, therefore let us give emetine a trial in some or all of our cases of chronic *aches*.

A. L. NASON.

Maben, Miss.

[Doctor Nason is becoming an emetine enthusiast. Early in January (since writing the preceding) he wrote us: "Recently I was called to help do a curettage on a young woman whose menstrual period had lasted two weeks, with alarming loss of blood. With the consent of her physician, I determined to try emetine hydrochloride. I gave her 1-2 grain of the alkaloid, and by the next morning the bleeding had stopped entirely. Two days have since passed without recurrence. All medical measures to arrest the hemorrhage had been tried and failed, and the curettage and packing had been decided upon as the only means of relief remaining. The emetine prevented a serious genital operation, one especially repugnant to a young unmarried woman." Experiences like this are mighty interesting.—Ed.]

PHYSICIANS SHOULD USE MORE LOBELIA

I have been an interested reader of the articles appearing in *CLINICAL MEDICINE* regarding lobelia and lobeline. I have read the journal for years, and I have used lobelia much longer than I have read the journal, and as Doctor Ellingwood says, I have often been surprised that so few physicians have availed themselves of the help this agent can give them.

The medicinal use of lobelia dates from 1791. At first it was employed in a very crude manner, being made into an infusion only. From that date to the present time its preparations have been perfected and its field of usefulness greatly enlarged.

Lobelia is a pure relaxant to the nervous, serous, mucous, and muscular structures. It influences the glandular system, fauces, and respiratory passages. It increases the flow of saliva, and in large doses is nauseating and even emetic. It is one of the greatest equalizers of the circulation, and in small

doses, oft repeated, the entire system can be brought under its influence without nausea following. The circulation is improved, the skin, liver, kidneys, and bowels respond with increased activity, and the patient feels greatly relieved.

Lobelia is of great service in croup, bronchitis, pleuritis, nephritis, otitis, ophthalmia, and rheumatism. In contagious diseases, it may be used to bring out a tardy eruption. Long before the day of antitoxin it was depended upon by those who knew its value in diphtheria and croup. In dislocations with rigidity of the muscles, given in small repeated doses, it soon relieves the difficulty. Locally, it is of great value in abscesses, pleurisy, pneumonia, erysipelas, and indeed in any condition where a relaxant is needed. Some forms of asthma yield readily to it. In strangulated hernia, rigid os uteri, and tetanus it has no equal.

However, never use lobelia in nervous prostration, paralysis, gangrene or shock, except possibly in the last, and then with strong stimulation. During the twenty years I have employed the drug I have gradually widened its field of application, as a trial or a suggestion gave me new ideas.

I have treated a great many cases of pneumonia, and it has been my good fortune never to lose a case; the treatment was largely with some form of this drug. In delirium tremens its value should not be overlooked and the patient have the best treatment there is for his folly. It will put patients with delirium tremens to sleep, although it may take one, two, or three drams of the eclectic preparation, given at half- to one-hour intervals. I have even given four drams, at thirty-minute intervals, and the patient has awakened the following morning, taken light nourishment, had one or two more hypodermic injections, and gone to sleep again. Twenty-four hours of this treatment produces a sober, sane patient, with little trouble, and he is usually very grateful for the relief.

This brings me to my present mode of administering the drug. I have used with satisfaction many ounces of Lloyd's subculoid, as well as other forms. Lobeline and lobeloid, being more concentrated, provide very handy preparations, and one gets the same results as from the other forms.

The old fear of lobelia, when it was classed as a narcotic, I think caused many physicians to pass it by, the profound relaxation leading many to accept the narcotic theory. If its action is well understood there need be

no fear, even in the so-called "stage of alarm," as either time or a stimulant will restore the patient to normal, and as soon as the relaxation has passed, he will tell you he feels better than before.

Its most ardent supporters have much to learn as to its applications, and those who have not used it at all, or little, can win laurels and dollars by its employment in proper cases. This is strong praise to give a single remedy, but its merits are many, and its faults few, if the drug is handled properly.

E. E. BAILEY.

Spokane, Wash.

LICE THE PLAGUE OF THE ARMIES IN THE FIELD

To my little article on this subject published in the November issue of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* I desire to add an extract from a letter of Professor A. Loewy, which was written in the field and appeared in *Berliner Klin. Wochenschrift*, 1914, No 43:

"Besides the cold temperature, our warriors, especially here in the Eastern Army, complain of another evil, namely the lice plague. Thus far, no remedy against it has been known which is effective. It has been said that wearing silk underwear was prophylactic; if silk merits this reputation only a small part of the army can avail itself." Doctor Loewy learned from an old soldier, whom he knew for tens of years as being a trustworthy man, that impregnation of the garments with asafetida gum would keep vermin away as long as the odor of the drug lasted. Doctor Loewy, however, does not say that he himself has given this remedy a trial.

A. ROSE.

New York City.

[Perhaps some reader of *CLINICAL MEDICINE* has a sure cure for lice. Any offerings? Be sure to read the article upon typhus, on page 62 of the January issue.—Ed.]

GELSEMININE AS AN ANODYNE

Recently, while calling on a patient, I found his wife in great pain from an attack of dental neuralgia. The cause was a plate that had worn the enamel from her teeth and the fact that only a dentist could give her relief seemed so obvious that she had not called for medical relief. Domestic affairs were in such shape that this had to be postponed,

and, merely to "give her something," I told her to take gelseminine hydrochloride, 1-250 grain, every two hours to the point of physiological effect. To our mutual surprise this treatment eased her pain so that not only could she sleep, but also could tolerate the pain until it had worn off entirely. She has not yet seen her dentist.

Later, this same woman had a severe attack of muscular rheumatism, with much swelling. Epsom salt was the principal remedy, but gelseminine immediately relieved and finally entirely controlled the pain. Morphine was available, but she cannot tolerate that drug. These two instances seem interesting, as under ordinary circumstances I should have given morphine for temporary relief.

JAMES E. COSGROVE.

Brooklyn, N. Y.

AN EPIDEMIC OF 45 CASES OF ACUTE INFECTIOUS ICTERUS

During the months of November and December, 1913, I had the unusual opportunity of seeing 45 cases of acute infectious (contagious) icterus. This epidemic was studied in a country practice, and 80 percent of the cases were confined to two public-school districts. Of the patients, 20 were males and 25 females. The youngest was 3 years, the oldest 40 years; 38 were between 3 and 15 years, while 7 were between 15 and 40 years of age.

Thirty-five of these cases developed with a sudden onset. There was a chill, or feeling of being cold, headache, furred tongue, anorexia, nausea and vomiting (or nausea only); abdominal pain, followed within twenty-four hours by a temperature ranging from 100 degrees to 104 degrees F.; pulse slow in comparison with temperature. In ten patients, most of whom were older, the symptoms developed more insidiously, with anorexia, malaise, headache or backache, or both, nausea, abdominal pain, and a temperature of 100 degrees to 102 degrees F. within forty-eight hours.

About ten, mostly children, showed cerebral symptoms but none had convulsions.

Abdominal pain, usually of a dull, annoying character, was a constant symptom in all, and this persisted for from three to seven days, and in some was so intense as to require sedatives.

Enlargement of liver and spleen was noted in a majority of the cases, and jaundice developed in every instance, usually on the

second day, but occasionally not until the third or fourth day, and this persisted from five to fourteen days. The cases in which jaundice persisted more than one week were all adults. The icterus was usually of mild degree, sometimes being so slight as to be difficult to recognize, while in a few it was intense. Pruritus was complained of in most cases. Light or clay-colored stools were noted in most cases and constipation was the rule. The urine showed bile in all cases in which the urine was examined.

About 75 percent of these patients recovered completely within one week, while the remainder, most of whom were adults, complained of some intestinal disturbance and weakness for several weeks. There were no deaths. The earliest diagnostic symptoms were abdominal pain or discomfort, and the constant slow pulse. With these two symptoms only, I should consider making a tentative diagnosis of jaundice until the case was further developed.

The treatment was largely symptomatic. Calomel and laxative salines were given, and refrigerants, when the fever was high and cerebral symptoms marked. Atropine and gelseminine controlled the abdominal pain best. Little, if any, food was taken during the first three days, then light diet was ordered.

Deductions

1. I consider acute infectious jaundice to be contagious rather than infectious and comparable with the other acute contagious diseases of childhood. This seems to be borne out by its sudden and uniform onset and course; from the fact that it affected mostly children; from its tendency to be confined to certain public-school districts; and from the fact that there seemed to be strong evidences of an incubation period of about two weeks' duration.

2. Acute bilious fever, acute infectious jaundice, autumnal jaundice, Weil's disease and other infectious maladies characterized by jaundice, are not distinct diseases, but rather, different types of the same infection, being modified by age of patient, by the virulence of the infection and season of the year.

GUY C. KELLER.

Dowling, Mich.

[Epidemics of icterus are not uncommon, as an examination of the literature will show. Unfortunately, nobody seems to know positively just what causes them, perhaps because there are a number of causes. Weil's

disease (which is an epidemic icterus, as Doctor Keller points out) has been ascribed to infection with the bacillus proteus, to paratyphoid bacilli, and to other organisms. It would have been interesting to make a study of the stools in some of the cases reported herewith. We urge our readers to do clinical research work of this kind on all these unusual cases.

Doctor Keller's treatment was excellent, although I should have been inclined to add to the remedies which he employed something to increase the flow of bile—as the bile-salts, chionanthus, or the salicylates—and probably hexamethylenamine (urotropin), in an attempt to sterilize the bile-passages. Bacterins should also be of value, especially in cases showing a tendency to persist beyond the acute stage. Cultures could be made from the stools, both for diagnostic and therapeutic purposes. What say our readers about these cases? The report is so interesting that it ought to excite comment.—ED.]

THREE CASES OF TRANSVERSE PRESENTATION

Probably a few readers of CLINICAL MEDICINE will remember my account, related some three years ago, of the difficulties encountered in a case of transverse presentation and placenta prævia. This lady is still residing out in a "pasture," fenced in all around, and about the only way to get there is to take some sort of aerial craft. However, by crawling through several fences and giving my trousers a few ugly tears, I have managed to get out to her home and deliver her of two more babies, making in all three transverse presentations in less than three years.

December 7, 1911, this lady was delivered after the strenuous efforts of another physician and myself. Result: Dead child, at full term. It died during manipulation.

February 25, 1913, another transverse presentation. This time, also, I had consultation with a neighboring physician and after considerable time and trouble, we managed to get mother and child separated. Result: Death of child at full term. It died during manipulation.

November 12, 1914, at 8 o'clock in the morning, I was again notified by the husband of this woman that "he thought" his wife was going to have a baby sometime during the day. About two hours later he returned, and requested me to come at once, since she was now having some awful pains. Upon arrival at her home, and on examining the

woman and finding, as I had suspected, another case of transverse presentation, I immediately hurried back to my office for some necessary articles which I had forgotten, and to call up another physician to assist me in the case.

I had hardly arrived at my office before the messenger reached me with the request to come back at once. I thought that perhaps the whole thing was over, and that the child might have been expelled in *conduplicatio corporis*, which we know will sometimes happen when the pains are strong and the fetus is macerated or very small. However, when I again arrived at the patient's house, I found everything *in statu quo*, only some of the neighbors thought the woman "would bust her womb" if such pains kept on much longer.

There indeed was no time to lose. The bag of water had ruptured several hours before, the shoulder was presenting at the cervix, and the pains were increasing in severity every minute, and without any result. There was no time now to call in expert counsel from afar—I simply had to knuckle down to business without further deliberation.

Shoving a rough board under the sagging mattress I got the woman over the edge of the bed and with two women supporting legs, I performed podalic version in less time than it takes to write it. The position was left scapula posterior, which probably accounts for the ease with which this was accomplished—not because of any particular dexterity on my part. Result: Delivered this baby alive at 12:15 p. m.—a strong, healthy girl, born at full time, weighing about 10 pounds. Placenta was delivered shortly afterwards, but with considerable hemorrhage, which was soon checked. The mother is making a rapid and uneventful recovery at this writing.

The position of the child in the first two deliveries was left scapula anterior, or in the left cephaloiliac position. The last delivery, as here related, was left scapula posterior, or in the dorsoposterior position. Some textbooks state that the dorsoposterior positions are easier to deal with, but I certainly have not found them so.

If the last case had been dorsoanterior, I could not have hoped to deliver this woman of a living child, or at least my experience with this woman and others would warrant this belief.

H. G. HENRIKSEN.

New Market, Minn.

[We need more of these live comments. Professor Rittenhouse has promised us some good papers dealing with the problems of the general practitioner in this field. They will begin in an early issue. But we want to hear *from the men in the field themselves*. Tell us your troubles; tell us your problems; tell us your successes; and tell us your failures.—ED.]

HEMORRHAGE CHECKED WITH EMETINE

One evening last week I received a hurry call from the Bronx to see a young woman said to be "bleeding to death." I found that the woman had been to a nose and throat specialist for an operation on the nose. After the operation she went home, and at 5 o'clock began to bleed, and kept it up until she lost a large quantity of blood. When I reached the patient's home, at about 7:30 p. m., her mother said: "I guess she is gone, Doctor. She tried some powder her physician told her to get from our druggist, and has used nearly a bottle of adrenalin, all without benefit."

I gave the young woman a hypodermic injection of emetine hydrochloride, and within three minutes the hemorrhage ceased entirely, and it has not returned. (While writing this letter the young woman's mother called me up to say that her daughter is all right.) Can you beat it? It is a great satisfaction to have such results.

P. DAVID SHULTZ.

New York City.

[We owe this letter to the kindness of Mr. Julian Heath, of New York, to whom it was addressed, and who very kindly gave it to us for publication. It will interest readers of CLINICAL MEDICINE to know that emetine hydrochloride is now being used for the prevention as well as the arrest of postoperative hemorrhage in nose and throat operations. We have been informed that Doctor Weinstein, of New York, is so employing it in his tonsillar work, and with very satisfactory results.—ED.]

THAT LIST OF INTERNAL-REVENUE COLLECTORS

In the editorial on the Federal Narcotic Law, this issue, we partially promised a list of the Collectors of Internal Revenue. We regret that we have been unable to get hold of such a list in time for this number. It is coming, and will be printed next month.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

I AM always interested in the editorials in THE AMERICAN JOURNAL OF CLINICAL MEDICINE; they always have been to me one of the most attractive features of the periodical. I was especially interested in two in the November number, entitled "Thoroughness" and "The American Sanitarium's Opportunity." I am fully in accord with the sentiments expressed in the first-mentioned editorial, where it says: "The medical profession is *not*—there is no use blinking the truth—is *not* living up to the possibilities and obligations which the achievements of its own scientific workers have laid upon it. The average American practitioner is not doing as thorough work as he might. It is not that he lacks the skill or the means, or even, in a certain way, the will. It is just that habit of making shortcuts and of getting there quickly that is the curse of the American temperament."

In my work at Mudlavia, especially, have I noticed this lack of thoroughness on the part of a few physicians who have sent patients to me or who have been the "family physician" of patients who have been under treatment here. Not for a moment do I question the ability of the doctors to whom I refer, for many of them I know to be very competent men; however, many of them have failed to get into the cases as deeply as they should have done. For example, not long ago a gentleman came here, as he said, for the "baths." He told me that he had been ill for six or seven months and was getting worse rapidly. During this time, he had consulted six different physicians in a large western city, but had received no benefit. Before we gave this gentleman baths or instituted any line of treatment whatever, he was examined thoroughly, as is every patient who comes here for treatment.

Upon examination of his blood, we found that he had pernicious anemia. I told him that the baths would do him harm and suggested that he return to his home and have one of the physicians whom he had consulted take charge of his case. He replied that

he did not want anyone of the doctors he had consulted, for *not one of them had made a thorough examination* of him, and that this was the first time he had ever had his blood examined. Now, I have not a doubt but that any one of these physicians could have made a diagnosis of pernicious anemia had he gone into the case thoroughly and examined the gentleman's blood. It was not a lack of ability, but a *lack of thoroughness*.

I have had cases of tuberculosis of the joints and even of pulmonary tuberculosis sent to me for rheumatism, whereas a little more care on the part of the attending physicians would have enabled them to make correct diagnoses.

I believe that the people are now demanding more thorough examinations on the part of their physicians. The time has passed when anyone can succeed in the practice of medicine by merely asking his patient a few questions, looking at his tongue, and prescribing two or three kinds of medicine. Another thing that is demanded is greater discipline and more arbitrary treatment; in other words, the doctor should conduct the case as *he* wishes it conducted, and not allow the patient to conduct his own case.

The other editorial referred to, the one entitled "The American Sanitarium's Opportunity," is especially timely. It is too true, as the editorial says, that the American sanitarium is too easy-going; that the inmates are regarded and treated as guests rather than patients. The average sanitarium reminds me much of a cafeteria where the patient helps himself to what he wishes.

In Europe, it is far different. There, the medical department of such an institution is supreme, and everything—baths, diet, exercise, medicine, all else—is rigidly and minutely prescribed by the medical staff; and the patients are held to these prescriptions with almost military discipline. The American who goes abroad and is treated in one of these European spas or sanitariums is

prepared to obey the doctor in charge. And he rather likes the discipline; moreover, here, in America, he resents it and wishes to conduct his own case.

I encountered this same trouble when I came to Mudlavia—which had formerly been a bath-resort—when I attempted to make it a strictly scientific medical institution. Many of the old guests (and they could justly be called *guests*) rebelled at the thorough initial examination which I required of every patient before taking any form of treatment. If they took baths, they themselves wanted to regulate their duration and the temperature, rather than to leave these matters in the judgment of the physician in charge. They wished to eat what they had been accustomed to eating, and rebelled at being placed upon a diet suitable for their special condition. Yet, these same people would have fallen into line without trouble at Carlsbad or at any of the other European resorts.

I am glad to say, however, that in the year and a half I have been at Mudlavia a great change has taken place. The old guests have been educated to the new order of things; they see the difference and appreciate the value of the change. Now the majority of the new guests come with the expectation of placing themselves entirely in the hands of the medical department and following directions implicitly. People have to be educated in these matters; and it is the duty of the physician, whether engaged in private practice or institutional work, to examine every patient thoroughly and to impress upon his mind the necessity of following the doctor's directings implicitly if he expects to get results.

I hope that I may be excused for thus speaking of personal matters, but the editorials referred to appealed to me so strongly that I feel justified in advertising these experiences of my own.

Here are a few practical pointers which I have gleaned from various medical journals recently.

A. Orenstein lays down a regimen of hygiene and diet for the treatment of disease in the aged. He points out that the aged require less food of all kind, because they utilize less. Overfeeding, or rather a normal adult's ration, overtaxes their digestive powers and floods the blood with effete products which the kidneys and other excretories cannot handle. Liberal drinking of water should be encouraged. Baths, which should be taken regu-

larly, should be neither hot nor cold, of short duration, and taken preferably in the evening, when they conduce to a good night's sleep. Fresh air and exercise are indispensable. Clothing should be light, warm, loose, and of woolen material. The feet should be well protected.

Cathartics are the only class of drugs that are administered to the aged in larger doses than to middleaged persons; not with proportionate safety, however. General weakness is the complaint common to all. Since we have no specific against physiological old age, we must adapt our treatment to each individual. Codliver-oil in 1-dram doses is beneficial for some. Strychnine does good by stimulating digestive processes as well as the circulation. Alcohol, in the form of whisky, may be given in small doses, to stimulate the appetite. The treatment of disease in senility should be conservative and without drastic changes in the mode of life.

E. A. Rowland maintains that the duty of the practitioner of medicine is plain. By insistence upon required medical and surgical measures, he may exert an influence that will affect thousands in the years to come. The greater proportion of criminals and mentally deficient show evidence of hereditary syphilis or of uncinariasis, the toxins from which affect the mental and moral attitude as well as the physical condition. Also, the deficient oxidation caused by adenoids, hypertrophied tonsils, and turbinates affects the brain and the nervous tissues to the same degree that it does other structures; and, since brain and nerves are slowest in regaining normal tone, we may expect a permanent mental change that makes for mental deficiency and moral degeneracy. The great scope for improvement of the body, mind, and morals of the race in the hand of the physician of today is really wonderful.

Acute septic arthritis may occur by hematogenous infection, especially in infants of depressed vitality, and is analagous to the acute bone infections. The disease is at first limited to one joint and may go on to suppuration. The differential diagnosis from acute rheumatism is difficult at first, but the absence of immediate spread to the joints, besides the signs of suppuration, soon render the diagnosis clear.

In all stages of acute appendicitis in children, operation should follow immediately upon diagnosis. The signs and symptoms may be slight, while there are very serious conditions in the abdomen, and only surgeons

having a very wide experience may, in rare cases, be justified in waiting for convalescence before proceeding to operation.

In many patients having enlarged tonsils and adenoids, the temperature, if carefully taken at frequent intervals, will show an increase over the normal. Here, the explanation probably is to be found in a focus or foci of infective material.

In ensuring the diagnosis of tuberculous joint, the tuberculin tests of Calmette or that of von Pirquet may be applied, or an injection of Koch's old tuberculin may be given, which, in tuberculous cases, gives a reactionary rise of temperature within twenty-four hours.

A good food for sick babies is buttermilk prepared by adding about 40 grams of sugar and 15 Grams of flour to 1 liter and boiling ten minutes. It has a low fat content and lactic acid as a valuable ingredient.

Primary pneumococcal peritonitis in children runs a comparatively benign course, which cannot be said about streptococcal infections.

Remember Bazin's disease when a girl at the age of puberty presents herself with a round, deep ulcer on the calf of the leg.

In the thread test for gastric acidity, Schwarz uses a solid gelatin capsule containing a heavy powder giving a neutral reaction. The capsule is pierced and a thread drawn through it which has been soaked for half an hour in a 0.25-percent aqueous solution of congo-red. The thread is 120 cm. long and, after being passed through the capsule, is tied over it. This capsule is swallowed half an hour after a test breakfast, the free end of the thread being held with the hand. After fifteen minutes the thread is drawn out, the capsule having dissolved in the stomach in the meanwhile. The end of the thread which has been in the stomach is now dark-blue or violet, proportional to the amount of hydrochloric acid in the stomach content. If the thread still is red, this shows anacidity or that the capsule has stuck somewhere on its way. By this simple means, the condition in regard to gastric acidity can be determined without inconveniencing the patient.

In *The Urological and Cutaneous Review*, I find the following dermatological hints:

In all cases presenting an intense itching, unless they are of parasitic origin, it is very important to examine the urine carefully, as frequently diabetes or nephritis are present.

Tar should not be employed over wide areas of the skin, since very acute poisoning may result. The scrotum, axilla, and face are most sensitive to the action of tar.

It should never be forgotten that the proper preparation of a salve in skin diseases is of as much importance as the choice of its ingredients.

One should always remember that the action of a drug differs in intensity in the various forms of salve, paste or lotion.

Make it a routine practice to examine the mouth of every skin-patient, for it often happens that interesting mouth lesions exist, unsuspected by the patient.

In a stubborn leg ulcer, it is well to try the effect of zinc ionization before condemning it as "chronic."

To make Lassar's paste less sticky, it may be mixed with an equal part of lanolin.

Sea bathing, though often contraindicated in cases of eczema, may generally be safely indulged in by the psoriatic.

Small doses of arsenic (gr. 1-60) given in granule form in connection with some vegetable bitter like quassin, every hour for a few doses, acts almost as a specific in gastralgia and enteralgia.

In a case of surgical shock where there is danger of the patient passing into a state of collapse, medicines must be given that increase the systole of the heart, such as alcohol, brandy or ammonia. If there is time, that is, no immediate danger of collapse, in surgical shock, then morphine is the medicine of medicines; so that in many cases it is good practice to give morphine with alcohol, for instance, where there is no fear that the patient is going to sink too suddenly. Medical shock is produced by all injuries to the abdomen and the abdominal viscera, and produces the same effects as in surgical shock. Thoracic inflammations do not tend to produce shock, but the reverse, there being exaltation of spirits, and so on, as in phthisis.

When you have a rapid heart and an increasing nervousness, do not pass it lightly by as a "nervous-heart case." Look carefully for other signs and symptoms of hyperthyroidism such as tremors, dyspnea and ophthalmos. Do not wait for a marked thyroid enlargement but endeavor to get your patient to consent to early surgical treatment for a condition that is unquestionably surgical.—*MacKechnie*.

Among the Books

GIBSON: "THE POSTMORTEM ROOM"

A Handbook for the Postmortem Room. By Alexander G. Gibson, M. D. (Oxon), F. R. C. P. (Lond.). University Demonstrator in Pathology, Oxford, England. New York: Oxford University Press. 1914. Price \$1.50.

Postmortem examinations, as the author points out in his preface, are made with three objects: first, to lay bare the results of the disease, so as to verify or determine the cause of death; second, to observe the processes of disease; third, to acquire skill and judgment in postmortem work, the better to enable the student to interpret what he sees in life and in death. The first of these purposes concerns the physician; the second, the pathologist; the third, the medical student.

It is for the furtherance of the third object that this little hand-book is designed. The methods dealt with are intended to cover the technic of all ordinary postmortems that are likely to be undertaken in a general hospital. Rare cases, and exhaustive details, have been omitted. The methods described are those in use in the Radcliffe Infirmary, Oxford, where the author does his work, and are based, for the most part, upon the methods of Virchow as practiced in most of the great schools.

The arrangement is excellent, since it insures, if faithfully followed out, a sequential exposure of the various tissues and organs, so that they are seen in all of their internal relations before being excised or displaced. The book is, in fact, a capital little manual for autopsy work.

PRACTICAL MEDICINE SERIES

The Practical Medicine Series. Under the Editorial Charge of Charles L. Mix, A. M., M. D. Volume II, Series 1914. General Surgery. Edited by John B. Murphy, A. M., M. D., LL. D., F. R. C. S. (Eng.), F. A. C. S. Chicago: The Year Book Publishers. Price \$2.00.

In this year's review of surgery will be noted the report of a great variety of new methods of anesthesia and analgesia, with a

goodly number of cases recorded in each, with fairly satisfactory results. Singularly enough, however, the greatest change in the surgical situation has come about, not through surgical channels at all, but by way of medicine. The rapid and ever-increasing use of serums and vaccines, and the more specific cultures of the autogenous products, furnishes the most striking innovation in the surgery of the past year or two. In other words, the biologic spirit has invaded surgery, just as it has invaded medicine, and is changing the face of the surgical map.

Next in importance, the editor thinks, the advance in thoracic surgery and the improved technic and results in nerve anastomosis must be given consideration. These remarks do not, of course, convey any idea of the scope of the volume, which includes a review of practically all that has been "doing" in surgery in the past year.

ANDERS-BOSTON: "MEDICAL DIAGNOSIS"

A Textbook of Medical Diagnosis. By James M. Anders, M. D., and L. Napoleon Boston, M. D. Second edition, thoroughly revised. With 500 illustrations, some in colors. Philadelphia and London: The W. B. Saunders Company. 1914. Price \$6.00.

There could not be found any better-adapted team to write a textbook of diagnosis than Doctors Anders and Boston; and the result of their joint work is, as one naturally would expect it to be, a well-balanced presentation of the clinical and laboratory phases of the subject. "A broad conception of the subject of diagnosis recognizes both clinical and laboratory methods and regards them as being equally important in the investigation of disease." Such is the authors' avowed declaration of principle in their preface; and this is carefully carried out in the content and arrangement of the book.

Naturally, the greater part of the revision and addition represented in this new edition refers to laboratory diagnostics. In this respect, the book is brought closely up to date, including such things as the cobra-venom reaction in syphilis, the Dohle bodies in

scarlatina, albuminous sputum, and so on. But it must not be supposed that the progress of physical diagnostics is neglected. Clinical tables have been added on several important subjects, and the sections on blood pressure and Stokes-Adams disease virtually have been rewritten.

Altogether, this is one of the most complete and efficient works of its kind that we ever have had the pleasure of examining, and it ought to be well thumbed by the conscientious doctor who is interested in making a thorough diagnosis.

HARE: "PRACTICAL THERAPEUTICS"

A Textbook of Practical Therapeutics. By Hobart Amory Hare, M. D., B. Sc. Fifteenth edition, enlarged, thoroughly revised, and largely rewritten. With 144 engravings and 7 plates. Philadelphia and New York: Lea & Febiger. 1914. Price \$4.00.

The fact that fifteen editions and numerous reprintings have been called for since this book first appeared in 1890 is sufficient evidence of its popularity and usefulness. The author also states that it has served to stimulate his endeavor to maintain this useful character and to keep the book up to date. The physician not only wants to know what drugs can do good and how they do good, but he also wants to know how to use them and when to use them so that they will do good; in other words, he wants the facts reached by scientific investigation placed before him in such a way that the treatment he undertakes will be rational and well foundationed. If any measure has proven useful, even though its rationale has not yet been thoroughly explained, he wishes to have the available clinical data of such a measure also placed before him.

These things have been borne in mind by Doctor Hare in the preparation of the present text. He has gathered together what is new and has tried it in his own work, where possible, and has carefully analyzed the work of others, so that the actual value of a procedure can be arrived at; and this information he has placed before the reader. Many articles have, of course, been added to this new edition, all of which are dealt with in a judicial and unbiassed manner.

ADAMI AND McCRAE: "PATHOLOGY"

A Textbook of Pathology for Students of Medicine. By George Adami, M. A., M. D., and John McCrae, M. D. Second edition,

revised and enlarged. With 395 engravings and 13 colored plates. Philadelphia and New York: Lea & Febiger. 1914. Price \$5.00.

Perhaps in no branch of medical science has there been, during the last few years, such a bewildering multiplication of observed and observable facts as in pathology. Hence, the necessity for classifying and correlating these facts, so that they may not fail of their application to the concrete clinical side of medicine. And this work of classification and correlation is splendidly achieved in the classical work of Adami and McCrae. But that which, above all, makes their textbook supremely valuable is the continued emphasis that is placed upon the reasons underlying pathological conditions. As the authors themselves wisely say: "The ability to recognize individual pathological phenomena is of prime importance, but the power to grasp the meaning of the general laws according to which tissues act and react is paramount." If all of our teachers of pathology would govern themselves by this excellent principle, what a breadth of significance and what a range of usefulness it would give to the subject! Then, indeed, pathology would have its perfect work.

Much has been added to the present edition, including a new chapter on the more important infections and their prominent features, a presentation of the recent work on toxins and the effect of "split-products" in causing disease, being 93 new illustrations, 2 of which are colored plates. The volume is completely cross-indexed.

NEEF: "SURGICAL PRACTICE"

Guiding Principles of Surgical Practice. By Frederick Emil Neef, B. S., M. D. New York: The Surgery Publishing Company. 1914. Price \$1.50.

In the practice of an applied science and art such as surgery (for, no one, we think, will deny that surgery is an art as well as a science), nothing is so important to success as system; nothing so weakens confidence and annuls results so much as aimless pottering. Just as every man who thinks must have some philosophy of life, so every man who is engaged in any sort of scientific or artistic work must have a philosophy of his activity; that is to say, an orderly, sequential, coherent set of principles, not necessarily to enslave him to an iron-clad rule of procedure (that is not at all desirable), but to serve as the guiding basis for all that he does.

This, we take it, is the motive of Doctor Neef's little manual. There is no doubt that the general surgeon will find it invaluable as a book of reference in the basic sense as here outlined. Not least among its excellent features is the very full index with which the author sensibly has furnished it. Many books of this character lose half, sometimes almost their entire value through an utterly inadequate index. Doctor Neef has amply provided against this loss.

WILLIAMS: THE QUESTION OF ALCOHOL

The Question of Alcohol. By Edward Huntington Williams, M. D., formerly Associate Professor of Pathology, State University of Iowa. New York: The Goodhue Company. 1914. Price \$0.75.

But yesterday, and alcohol might have stood against the whole world as a therapeutic agent. Now none so poor as do it reverence. We venture to say that of modern physicians not one in a hundred carries alcohol in his armamentarium, except in the form of a solvent for tinctures and fluid extracts, or for outward application only. Of course, our prohibition friends take to themselves a great deal of credit for this change in the situation. And it would, in fact, be strange if their enthusiastic propaganda had not made some impress, even upon the medical profession. But the real factor in the decline of alcohol, both as a medicinal agent and as a beverage, has been the careful observations and the cold, unprejudiced reasoning of thoughtful, scientific men. One by one, the physiological fallacies which have bolstered its use have, under the light of modern knowledge and research, been disproven and discredited by the application of reason and the showing of fact.

Far from an expression of fanaticism, the modern view represents the application of sound common sense. Alcohol has been ousted from its status, not by the extravagant accusations and phillipics of fanatics, but by the calm, searching investigations of disinterested science and by its deliberate, dispassionate conclusions.

All of which we commend to the attention of the author of this little book; for we fear that he has failed to give it careful consideration. Doctor Williams may be right as to the inefficacy of mere coercive prohibition to do away with the alcohol evil; and we

concede that a great deal of hysterical exaggeration has been indulged in by the temperance enthusiasts. But he has certainly failed to read aright the signs of the times if he has not observed that these are not the real forces at the back of the anti-saloon movement of the last few years. Doctor Williams' proposed remedies for the saloon evil—which amount to a system of taxing vice to promote virtue—may be unassailable as a proposition in academic psychologies, but, unfortunately for their practical soundness, the remedy has already been set in motion, and it is of quite another character. The saloon must go!

LOWRY: SEX TEACHING IN SCHOOLS

Teaching Sex Hygiene in the Public Schools. By E. B. Lowry, M. D., Author of "Herself," "Himself," etc. Chicago: Forbes and Company. 1914. Price \$0.50.

In a recent article upon the etiology and prophylaxis of scoliosis, with special reference to the influence of postural errors, Doctor Badin, the distinguished French pediatrician, pertinently remarks that if the public schools would earnestly and intelligently cooperate with the physician, instead of being, as they are today, the breeding place of spinal curvature, they might be made veritable centers of prophylaxis against it—which, he significantly adds, would be no more than right, since the schools have been such potent factors in bringing about the hereditary tendency to scoliosis.

The same thing, I think, might well be said, with equal truthfulness, concerning sex hygiene, both physical and moral. Without systematic instruction in sex matters, the public schools are hot-beds of vicious misinformation and morbid eroticism; with a frank and intelligent profession, they might well become, in Doctor Badin's language, "veritable centers of prophylaxis."

This is the burden of Doctor Lowry's little preachment; and we heartily agree with her. She herself has done her part—and no small part—in the wholesome promulgation of the truths of sex, and is therefore entitled to speak with some degree of positiveness, not to say authority.

We urge physicians everywhere to read Doctor Lowry's book carefully, and then to appoint themselves each a committee of one to see to its being carried into practice within the sphere of his professional influence.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6063.—“Referred Pain in Heel.” J. M. T., Nebraska, writes:

“I have a patient, a man 80 years old, quite heavy, a hearty eater, who for six months has had a pain on the under side of his right heel, which hurts worse when he is sitting down than when up and about. The sore spot is about the size of a dime. I have used the clean-out method, anti-rheumatism combination, and antacids, until I have been fearful of the dosage; but nothing helps. Salt-baths and other measures have been tried.”

Of course, it is impossible, without our having a clearer idea of local and general conditions, to express a definite opinion as to the cause of the pain in your patient's foot. Do not forget, however, that very frequently pain in the heel or ball of the great toe, especially of a sticking character, is caused by prostatic hypertrophy. Many patients say that the sensation is that of a peg of wood being driven into the deep tissues. The fact that the pain is worse when he is sitting down leads us to believe that in this instance it is referred and of prostatic origin.

Let us suggest that you examine the man's prostate gland thoroughly. At the same time see whether pressure upon the painful area increases distress. If there is any local inflammation, applications of guaiacol, methyl salicylate, and iodine, besides hot epsom-salt sponge baths probably would prove beneficial. You might also give macrotoid, bryonin, and colchicine, in alternation with other rheumatic remedies. Do not forget saline purgation.

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QUERY 6064.—“Gastric Lavage.” W., Georgia, desires full information as to how to proceed when using the stomach-pump in a case of poisoning.

To wash out the stomach is such a simple matter that it hardly seems necessary to

describe the process in detail; furthermore, the procedure is fully outlined and illustrated in virtually every modern work on minor or emergency surgery. The plain stomach-tube, with funnel attached, is preferred by this writer to the kind provided with a suction-bulb and called stomach-pump.

Have the patient sit on a stool or straight-backed chair, with his head thrown backward, so as to bring the mouth-cavity and gullet as nearly as possible in a straight perpendicular line, without straining, and muscles relaxed. The tube, having been washed out with warm water and the end lubricated with glycerin mixed with an equal measure of water, or with glycerole of starch (fats and petrolatum quickly ruin the rubber) is gently passed with the right hand directly back to the pharynx, the index-finger of the left hand guiding the point of the tube over the epiglottis; it is then pushed gently downward into the stomach, up to the white or black ring-mark 22 inches up. As a matter of fact lubrication is rarely needed, the esophagus being normally well “oiled.” If any obstruction is encountered, the tube should be withdrawn a little and then pushed gently downward again. The patient (if conscious) should be instructed to swallow from time to time, when simultaneously the operator pushes the tube. All manipulations must be made without the employment of any force whatever.

Three kinds of tubes are in use, namely: (1) the plain stomach-tube; (2) the tube with bulbs in the middle, by pressure upon which it is possible to draw out the contents of the stomach, the proximate, or free, end of the tube being lowered into the receiving-vessel; (3) the stomach-pump proper; consisting of a syringe connected with two tubes, one at the end (nozzle), the other at the side. The passage of fluid through the nozzle is regulated by a valve controlled by a lever.

The nozzle of the pump is attached to the stomach-tube already in position, while the end of the other tube is placed in a pan of warm water. By withdrawing the piston and opening the valve, the water is drawn from the basin; by closing the valve and depressing the piston, the water is forced into the stomach. When a sufficient quantity has been injected (in an adult, ordinarily about a pint), the action of the valve is reversed and the fluid drawn out of the stomach and discharged through the lateral tube into the basin. This process is continued until the wash-water returns clean.

Other apparatus for washing out the stomach can be procured, but the straight tube with funnel ordinarily proves very satisfactory, and such a one always should be in the doctor's satchel, ready for use at any moment. When "stomach washing" is essential, speed many times is not any less so. In this connection, see Candler's article on "Emergencies of General Practice," printed last year in *CLINICAL MEDICINE*.

If possible, get some fellow practitioner familiar with the procedure to introduce the tube in your presence; then experiment upon your own person. You need not necessarily empty your stomach or throw in any water, but at least pass in the tube. The revered gentleman who taught this writer much of what he knows about internal medicine insisted that none of his students should use the stomach-tube upon a patient until he had successfully accomplished gastric lavage upon himself (and he was right!) and also had repeatedly performed the maneuver satisfactorily upon a classmate. The delicacy of touch developed by this method was astonishing. Incidentally, precisely the same rule applied in catheterization; yes, and we boys often indulged in speculations as to what might have happened had this good professor held—the chair of applied obstetrics!

QUERY 6065.—"Adenitis and Glandular Fever." E. T. S., Ohio, desires information concerning glandular fever, or inflammation of the cervical lymphatic glands. "I have," he says, "these cases in children as well as in adults. In one case (adult), there is no fever, no sore throat, just a swollen cervical gland. Another, a child 5 years old, had tonsillitis, and a few days later the glands became swollen, and the edema has now extended half-way around the neck. At the same time the bowels became inflamed and the abdomen tympanitic; the temperature was between 101° and 104° F. The glands still are very

hard. Will anything used locally be of value? What would be the best internal treatment? Will any treatment avoid lancing the gland?"

There is, as you of course are aware, a wide difference between glandular fever and adenitis. You say, "in one case, no fever, no sore throat, just a swollen cervical gland." This would appear to be a simple adenitis.

In glandular fever, the temperature usually runs high, tonsillitis may or may not accompany or precede the condition, but almost invariably the patient feels feverish, complains of pain in the throat and about the jaw, and within twenty-four hours swelling of the submaxillary and cervical glands occurs. The head is moved with difficulty, and the indurations may be slightly or decidedly painful. The fauces appear reddened and edematous in eight cases out of ten. Vomiting may be present, or, where absent, there is likely to be diarrhea. Not infrequently a more or less marked anuria ensues. All of these symptoms may appear and recede within three days. Of a series of cases treated by the writer, only one ran over the fifth day. In exceptional instances, the symptoms persist, the fever fluctuates, the glands remain swollen, and cough develops.

A full description of the disorder and outline of treatment will be found in "Everyday Diseases of Children" (second edition). The chapters on the treatment of acute and chronic adenitis should also be studied.

As a rule, acute adenitis appears after bronchitis, pharyngitis or other localized inflammation. In nine out of ten cases, the cervical glands alone are affected and the inflammation may subside (as it will under treatment) or go on to suppuration.

In the chronic form, the glands are hard, and no systemic disturbance is apparent. Eczema, a chronic sore or a decayed tooth may set up the condition. Suppuration here is improbable. It is not always easy to exclude tuberculosis, but careful observation should lead to a positive diagnosis.

In acute adenitis, give small divided doses of calomel and irisoid, every night for three days, and a full dose of magnesium sulphate the next morning; calcium sulphide, phytolaccoid and rumicoid, 1-6 grain of each, four times daily; with calcidin, mercury biniodide and nuclein (dose according to age) thrice a day. The toilet of the nares, buccal cavity, and pharynx must be carefully attended to. Morning and night inunct over the affected area, 15 grains of unguentum Cr  d   (colloidal-silver ointment), and apply a compress wrung out of a saturated solution of epsom

salt. In some cases, especially if suppuration is inevitable, hot compresses prove preferable.

The 5-year-old boy probably had glandular fever. You will observe ("Everyday Diseases of Children," p. 239) the statement that "retroperitoneal involvement may occur and be evidenced by pain upon deep pressure." The treatment already outlined proves effective, but it is desirable to give additional doses of nuclein, 10 minims being dropped under the tongue twice daily.

Juglandoid exerts a peculiar action upon glandular structures and is particularly useful in true glandular fever. It may be given with or in place of rumicoid. Gelseminine hydrobromide is, unquestionably, the best direct remedy for hyperpyrexia.

Recently we have used iodine, grs. 2; ichthyol, oz. 1; glycerin, ozs. 3, locally, with satisfaction.

If you have a file of CLINICAL MEDICINE, see the answer to Query 5861, November, 1912. As is there pointed out, tuberculous and syphilitic adenitis must be recognized and treatment for the basal condition be instituted. In tuberculous patients, guaiacol is of benefit, locally as well as internally.

As you may be aware, in the fall of 1912 and spring of 1913, a peculiar and widespread epidemic of adenitis prevailed. Several hundred people in Cook County alone were affected, and physicians from all parts of the country wrote us inquiring as to what was causing the enlargement of the cervical glands in so many children. Investigation proved that virtually all these cases occurred in neighborhoods in which an epidemic of roup had occurred among poultry. In consequence, this writer advanced the opinion that the organism responsible for roup in fowls was the cause of the epidemic of adenitis. In not a single instance did suppuration occur, although, unfortunately, several children treated by old-fashioned methods died.

QUERY 6066. — "Favus or Tinea Decalvans?" A. J. D., Oklahoma, is treating a little girl ten years old who has always been healthy, excepting for enlarged tonsils and adenoids, which were removed when she was about six. About the 1st of September, her eyelashes began to break off, leaving them short and stubby, and a little later they came out entirely; in a few weeks, her eyebrows were similarly affected, and now for three or four weeks the hair around the forehead and in spots all over her head has been breaking off, leaving it about an inch long. The eyebrows and lashes will start to grow

anew, but when they get just long enough to be seen they drop out again. Close examination reveals just the slightest inflammation on both eyelids and brows. Our correspondent has been unable to find anything in his textbooks that gave him much light on the subject, and he requests assistance.

Unfortunately, it is impossible, with the data submitted, to venture a positive diagnosis. The condition described may be either favus, seborrhea or folliculitis decalvans.

In tinea decalvans, the eyelashes, eyebrows, and scalp may be involved. Occasionally the only precursory symptom is a slight irritation or insignificant itchiness of the affected area, although in some instances headaches, pruritus, burning or other manifestations of disturbed innervation are observed. If you have access to Stelwagon's "Diseases of the Skin," consult the chapters descriptive of the diseases named.

Atrophy of the hair may be owing to the invasion of parasites in the hair or about the hair-roots, or it may result from some known or unknown systemic condition from which the hair may suffer nutritive starvation and become weakened and fragile.

We suggest that you secure and forward to the laboratory a specimen of urine (4 ounces from the 24-hour output, stating the total quantity voided), and also some hairs plucked from the affected areas, besides a scraping from the skin. The latter should be placed on a slide and protected with a cover-glass.

QUERY 6067. — "Purulent Salpingitis?" J. L. Y., Kentucky, reports the case of a woman thirty-six years old, now eight months pregnant, who for two or three years has had what he diagnoses as pyosalpinx on the right side. Symptoms: slight fever, intense pains and cramps; then an intermittent vaginal outflow of mucopurulent offensive discharge. Relief of pain is secured only from the hypodermic use of dangerously large doses of morphine. Operation was insisted upon, but refused, one and one-half years ago. The patient now says that she will submit after the child is born. Reasons for diagnosis: (1) Can feel (and see) enlarged tube when full; (2) blood, pus and mucus are discharged (at intervals) from uterus and vagina. The blood pressure is 118 M., systolic; specific gravity of urine, 1030.

The Doctor asks: "Can you form a diagnosis? I fear that during labor she will reinfect herself. What can I do to prevent such reinfection? Would you advise some of

the vaccines; if so, what kind and when should it be used?"

We are inclined to confirm your diagnosis, but are at a loss to understand how there can be an "intermittent outflow of mucopurulent offensive discharge" from a pregnant uterus if the fetus is viable. Are you sure the "blood, pus and mucus" does emanate from the os? Is this woman a primipara?

In the chronic form of purulent salpingitis, sterility is usual, for, even though only one tube is involved, an endometritis almost always coexists. In old cases of pyosalpinx, extensive adhesions are the rule. These may be so formed that closure of the 'mbriated extremity of the tube is so secure that there is little danger of purulent material escaping into the peritoneal cavity; but, as you will readily realize, during labor such rupture might occur and cause a general peritonitis, which would almost inevitably prove fatal. It may be possible to drain the pus-sac through Douglas' cul-de-sac. This simple operation could be performed at once, thus saving the woman grave danger during delivery.

The mere administration of bacterins would not meet the immediate requirements, though, after delivery, an autogenous or appropriate stock bacterin could be used with advantage.

By all means, cut down the morphine, substituting for it, if an anodyne is absolutely essential, the smallest possible dose of hyoscine, morphine, and cactoid.

The blood pressure is fairly satisfactory; the specific gravity of the urine, considering the circumstances, is not abnormally high.

Of course, we are not cognizant of the exact conditions which obtain at the present moment. Is the tube now distended? Have you been able to discover any pus in the urine or feces? Are you quite positive that the discharge during the last few months has been from the uterus?

If you have access to a copy of Ashton's "Gynecology," read the chapter on purulent salpingitis; then, with your memory refreshed, examine your patient and give us a clear clinical picture. Do not forget the possibility of the sac being adherent to the rectum. The "extremely offensive odor" of the discharge would lead us to believe that such a condition obtains. In many chronic cases, the pus is sterile, but reinfection from the bladder, intestines, and so on may occur at any time.

As the patient usually suffers materially from the long-continued purulent drain, an

examination of the blood might prove informative.

Unless you drain, it would be advisable to have the woman delivered in a hospital, with everything prepared for immediate laparotomy. If you can present more complete data, it will give us great pleasure to aid you to the extent of our ability. Do not hesitate to call on us at any time.

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QUERY 6068.—"A Peculiar Paralysis." C. F. S., Guatemala, describes the case of a woman who some time ago was "taken with a severe stroke, apparently paralytic." The woman was of a nervous, jealous temperament and with her sharp tongue drove her husband to other women. "She was," our correspondent relates, "asleep when the attack (seemingly caused by a lesion in the central nervous system) occurred, the power of speech leaving her instantly, the entire left side of the body being paralyzed and her lower jaw dropping. Under treatment of other physicians, hypodermic iodine injections predominating, she is improved, the only symptoms being her inability to speak, barring a few simple words, and to write or to read more than a few words. The tip of the tongue is the only part of the member controllable. She eats and sleeps better than before her illness. All the other functions of the body are normal."

Some years ago, the Doctor had treated this woman's husband for chancres, and therefore assumed that the wife has a syphilitic affection; but the antisiphilitic formula and neuro-lecithin given for two months had no effect. She is now on chromium sulphate, 4 tablets a day.

With the limited clinical data before us, it is, as you will readily understand, out of the question to venture a diagnosis. Considering the highly nervous temperament of the woman and the real or fancied provocation she received from her husband, it is well to consider the possibility of a hysterical element. We should anesthetize the patient and see how many of the symptoms disappear during anesthesia and the recovery of sensibility; also test electrical reactions.

You do not state the patient's age, neither do you present any information relative to muscular conditions. Is there any atrophy, especially of the facial muscles on the affected side?

You state that the woman was stricken while asleep, the power of speech leaving her instantly. How (unless the woman talked in her sleep) could they possibly tell

when the attack really did occur or that inability to announce came on "instantly"? Are we to assume that when stricken the woman awoke and in some way summoned assistance, or was she found in the morning paralyzed and unable to speak? Investigation probably would show that the woman retired in a high state of excitement, after a "scene" with her husband, and was found paralyzed the next morning.

The possibility of the existence of a luetic lesion must be considered, in view of the husband's known syphilitic taint. It would be well to have a Wassermann test made. The fact that under injections of iodine (in what form was the drug so given?) conditions have improved tends to support the suspicion of syphilis.

You say, "the tip of the tongue is the only part of the member controllable." Is the rest of the organ furrowed or wasted? Is it drawn to the affected side? Are the few words the woman is able to speak clearly articulated? Is there exophthalmos? Search for and outline diagrammatically, if you will, anesthetic or paresthetic areas. Has the urine been examined?

In embolism, while there is a sudden onset, with hemiplegia, the loss of consciousness is temporary only, and fever develops after a few days. In thrombosis, prodromata usually are observed, although the onset may be sudden and come on during sleep. There may be various cranial nerve paralyses, with headache if syphilis is present. There is usually more mental impairment in thrombosis than in embolism. Embolism generally occurs between the ages of twenty and fifty, and is more frequent in women. Predisposing causes of thrombosis may be, among others, fatty heart, blood dyscrasias, syphilitic or gouty arthritis.

We trust that you will be able to make a thorough examination of the patient, for, with more definite data before us, we may be able to aid you to arrive at a diagnosis.

QUERY 6069.—"Harmless, Nonhemolytic Saponin." V. G. A., Illinois, requests specific information regarding the means by which saponin is rendered harmless, or detoxicated, as lately mentioned in these pages when that substance (soapbark, sarsaparilla, and so on) is to be used for foam-making in soda-water.

The information desired is not. unfortunately, at our command, and we can merely state that saponin owes its hemolytic property to its affinity for fat-bodies, with which

it unites. Thus, the erythrocytes are protected by an involucre containing lipoids, but when these are dissolved out (by saponin) the salt elements of the serum penetrate into the cell and cause its rupture.

Consequently, then, if saponin is first saturated with a fat, its affinity for the liquids of the blood-cells has been neutralized; and upon this fact rests the process of detoxicating this poisonous glucoside, cholesterol being the most suitable lipid for the purpose. (Lecithin also would serve.) However, saponification with a barium of an alkali hydrate also enters into the process. Incidentally, cottonseed (or other) oil constitutes an immediate antidote to saponin poisoning.

Full information may be obtained from a monograph (German) by Dr. Joseph Halberkann, a reprint from the *Deutsche Mineralwasser-fabrikanten-Zeitung* (1912, Nos. 25 to 30), and published by Hugo Herm. Mattner, Leipzig, Germany.

QUERY 6070.—"Warty Facial Growths." "I have a patient," says J. M. I., Indiana, "who is troubled with warty growths on his face. In the center of each wart there is a hair, as a rule. These excrescences have been treated, but almost without exception they return. What can be the immediate cause? He had them for several years and claims to have become infected in a barber shop. I cauterize them with phenol, but sufficient time has not elapsed since doing so to know the eventual result. Can you suggest a cause, also suggest treatment?"

After careful consideration of the limited clinical data presented, we are inclined to believe that your patient suffers from keratosis pilaria, or possibly lichen pilaris, a somewhat similar malady, if not, indeed, a mere variety of the former. We take it, of course, that syphilis can be excluded. In lichen planus, there is pruritus and also local inflammation. Crocker states that lichen pilaris rarely, if ever, attacks the face and upper part of the chest. In acne sebacea or cornea, the lesions are not conical. Those observed in keratosis follicularis usually appear first upon the head and face, later, when pronounced and increased in size, they assume a greasy or sometimes a dry, firm, brownish appearance; are semiglobular in shape, and vary in size from a small to a large pinhead. Closely examined, they are found to contain a hardened mass or plug.

In keratosis pilaris, conic, slightly acuminate or flattened papules, the size of a pinhead and of a whitish, grayish or dark-gray color,

are situated at the outlets of the hair-follicles, from which they project. Each papule is pierced by a hair, usually broken off at the apex, but sometimes coiled within the papule. These excrescences are hard, harsh and dry, as is the intervening skin.

We exclude *tinea barbæ*, of course, as you speak of warty growths.

If you will give us a clear clinical picture, doctor, we shall be able to help you more intelligently. Together with the clinical data, you might send a good photograph, showing the lesions plainly.

Meanwhile, place your patient upon the triple arsenates with nuclein and a highly nutritious diet, with some effective digestant before meals. Secure thorough elimination; wash the skin with carbazol soap and hot water; withdraw the central hair (if the lesions are not too many) or plug; or, better still, incise the growth with a sharp bistoury, then swab with *pure* carbolic acid, using a toothpick, and neutralize in one minute with strongest grain-alcohol. Then direct the patient to apply daily a solution of sodium bicarbonate or sodium borate, and supplementary applications of a salicylic-acid ointment, 10 grains to the ounce of petrolatum and lanolin.

If you have access to Stelwagon's "Diseases of the Skin," or to Crocker's, read the chapters on keratosis, lichen planus, etc.

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QUERY 6071.—"Caustics for Removing Warts and Moles." G. S. C., Georgia, wants information regarding the so-called dermal caustic. He has been told that monochloracetic acid would remove warts and moles, but cannot find that particular acid indexed, although he sees trichloracetic

acid mentioned. He wishes information about either or both, and about their uses.

The dermal caustic referred to (a solution of sodium ethylate), when properly applied, will destroy blood-filled growths without resultant scarring. The area to be treated should be wiped with alcohol, dried, and the surface moistened with the dermal caustic (applied with a glass rod). After a moment, the superfluous fluid should be taken up from the lower edge of the growth with a piece of blotting paper. A black eschar forms. The application may be repeated at intervals until the growth is destroyed.

In the application of this preparation, caution must be exercised. Do not try to do too much at one sitting. Get the full effect of the first treatment (which often will be more than one thinks, even in the case of large growths), before you apply the second. The red surface left after treatment often will disappear, with contraction of the capillaries. As the black scab begins to separate, keep the part well oiled, to avoid contraction or pitting.

Monochloracetic acid presents a very deliquescent, colorless, crystalline mass, melts at 63° C., is soluble in water, caustic, and is used in the form of a concentrated solution to destroy warts, corns, and so on.

Trichloracetic acid also occurs in the form of deliquescent colorless crystals, it has a pungent, suffocating odor, is very caustic, and is used as an escharotic, astringent, and hemostatic. It is recommended as the best remedy for removing warts, and similar growths from the nose and throat particularly. As an escharotic for corns, warts and so on, it may be used pure or in very concentrated solution; as a hemostatic and astringent, in 1- to 3-percent solution.



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Doers and Ditchers

IN AN editorial a few months ago I ventured the assertion that no real innovation ever originated within the organized constitution of any science or craft; it has always come from some individual, or non-conforming group of individuals, and pushed its way in the teeth of organized opposition. The *Chicago American*, in a recent excellent editorial under the title with which I have headed this article, further elaborates this psychology of progressiveness and conservatism.

"There are just two kinds of people in the world," says the *American*, "that advance or hamper progress, the doers and the ditchers. Whatever the doers, in their enthusiasm, conceive and suggest, the ditchers are bound to oppose and to wreck, if they can. The majority of us are simply neuters in this war of progress; our indifference is the battleground for the doers and the ditchers. We have the votes, and according to how they sway us so goes the world. Because finding fault is so much easier than working, and sitting still so much easier than hurrying, the ditchers are always in evidence."

The same thing is true in the more limited world of medicine as in the larger, outer world. And the ditchers are almost always

found among those in constituted authority, representing established interests and crystallized traditions. There seems to be something about "office" that immediately converts a man into a "standpatter." No sooner is he vested with a little brief authority than he begins, like the Irishman with the shillalagh, to watch with fine impartiality and scorn of discrimination for heads to hit. As soon as one appears above the sky-line, "There's a hid—it must be Tim Maloney's." Whack! The club descends, the head disappears with a hollow sound, and the owner of the stick shoulders it with a complacent grin and watches for another crown.

It takes an almost superhuman persistency to keep poking your head above the horizon until you wear out the man with the shillalagh and persuade him that you really have something to say. And when at last he does realize it, and grudgingly allows you to come into the landscape, then he usually trots you around and exhibits you to an admiring public as his personal discovery—"Wisha! Wasn't Oi the furrst to see his hid, whativver?"

Yes; I repeat my assertion that no worthwhile contribution to knowledge or practice has ever been flashed upon the world in the dazzling glare of authority, and welcomed

open-armed by the constituted representatives of medicine. Before it receives authoritative endorsement it has to be pushed through the discouraging, uninteresting, monotonous, tedious process of breaking down the barriers, in which there is not much glory, not much appreciation. And, as our friend the *American* says, "It has to be done if we are going to get anywhere. It has to be done in every project in the world, from the founding of an empire to the making of a loaf of bread. The picturesque moment in these two enterprises is the coronation of the emperor and the lifting of the loaf from the oven; but long before these culminations, there was the dreary work of inspiring faith and mixing the dough."

Perhaps the ditcher's function, though irritating and discouraging, is a wholesome check and corrective. Possibly he plays a really useful part in progress, after all. Let us hope he does. But let us bear in mind that, at the very best, it is a negative part. For my own part, my blood is red, and I sympathize with the man who does things.

We must have a weak spot or two in a character before we can love it much. People that do not laugh or cry, or take more of anything than is good for them, or use anything but dictionary words, are admirable subjects for biographies. But we don't care most for those flat pattern flowers that press best in the herbarium.—Oliver Wendell Holmes.

NARCOTIC LEGISLATION—A SECOND-HAND EDITORIAL.

We may have to apologize to our readers for printing so much about the Harrison Antinarcotic Bill. The subject is one of such extreme importance that we pray we may be forgiven if we trespass too much upon your good nature. However, we urge you to read this editorial very carefully. It is one which you cannot possibly afford to overlook, even though it is to a considerable degree a "second-hand" editorial.

No doubt every reader of CLINICAL MEDICINE believes that by this time he fully understands the meaning of the Federal Antinarcotic Law going into effect on March 1. However, it isn't wise to be too sure. We thought we understood the law perfectly. Now, it seems, we do not. As an illustration of the difficulties presented we ask you to read very carefully, very thoughtfully, the following quotation from Section 2 of the law:

Nothing contained in this section shall apply (a) to the dispensing or distribution of any of the aforesaid drugs to a patient by a physician, dentist,

or veterinary surgeon registered under the Act in the course of his professional practice only; *Provided*, That such physician, dentist, or veterinary surgeon shall keep a record of all such drugs dispensed or distributed, showing the amount dispensed or distributed, the date, and the name and address of the patient to whom such drugs are dispensed or distributed, *except such as may be dispensed or distributed to a patient upon whom such physician, dentist or veterinary surgeon shall personally attend*; and such record shall be kept for a period of two years from the date of dispensing or distributing such drugs, subject to inspection, as provided in this Act.

We have italicized a few words in the preceding so as to bring them particularly to the attention of the reader. Now, Doctor, are you sure that you understand this? Perfectly sure? Read it over again, very carefully this time. Now are you sure?

Nevertheless, Doctor, I fear you are mistaken. This portion of the law *seems* perfectly clear and transparent, and I do not believe that one doctor in a thousand would doubt that the meaning was this: that any physician personally in attendance upon a patient, in his home, his office, his hospital, or elsewhere, would be exempt from the provision requiring him to keep records of narcotic drugs dispensed. However, there seems to be another opinion, and since that opinion is expressed by the Commissioner of Internal Revenue, we shall of course defer to it. This opinion is published, as a letter, in the body of an editorial appearing in *The N. A. R. D. Journal*, the organ of the National Association of Retail Druggists. Please read the following extract from this editorial very carefully:

"A pertinent example of matters not definitely covered in the law or the official regulations, is an official communication from the office of the Commissioner of Internal Revenue, in which it is definitely decided that the doctor who dispenses narcotics in his office must keep a record of each transaction in which narcotics are disposed of. This ruling, which bears out our previous interpretation of the regulations, was uttered at the request of the Smith, Kline & French Company, of Philadelphia, to whom we are indebted for the opportunity of making it public. The official communication follows:

"Referring to your letter of January 25th, in which you call attention to an apparent contradiction in section 2, paragraph 'a' of the antinarcotic law, which relates to physicians' keeping a record of drugs dispensed 'except such as may be dispensed or distributed to a patient upon whom such physician, dentist or veterinary surgeon shall personally attend,' I beg to advise you that this office holds that a physician, dentist, or veterinarian must actually be absent from his office and in personal attendance on a patient in order to come within

the exemption of this section. In other words, *a physician, dentist, or veterinarian must keep a record of all drugs covered by the provisions of this law sold, bartered, exchanged, or given away in his office or place of business.*

"This ruling is a common sense one. It marks the victory of the National Association of Retail Druggists in its fight to restrict the dispensing doctor as a distributor of narcotics. It is the one regulation of the nefarious traffic, that druggists, sociologists, jurists, police, everybody with the exception of the dope-dealing doctor, has long known, and declared, to be most necessary for the assistance of local officials in their fight against the drug evil."
—*N. A. R. D. Journal.*

The clear meaning of this is, that every physician dispensing any narcotic drug in his own office must keep a record of such dispensing, said record showing the amount of the narcotic dispensed, the date, and the name and address of the patient to whom the drug is dispensed. This requirement will affect not only the general practitioner of medicine, but dentists, veterinarians, eye, ear, nose and throat, and other specialists—in fact, every practitioner using any of the narcotic drugs for any purpose whatsoever in his own office or place of business. Plainly, if his place of business is a hospital, a record must be made of all narcotic drugs dispensed in said hospital.

The oculist, who in his office dispenses three or four drops of a 2 percent cocaine solution will, according to this ruling, be compelled to compute the quantity of cocaine dispensed therein and keep a record thereof. The same is true of the dentist who uses cocaine to alleviate pain in extracting a tooth; also the same is true of the laryngologist, or the surgeon performing a minor operation.

According to this ruling, furthermore, if you, Doctor, are called across the hallway into the office of Jones, the lawyer, to put a drop of cocaine in his eye before removing a foreign body, or to give him a few diarrhea tablets containing opium, you will *not* be compelled to keep a record of the narcotics dispensed; if, however, Jones comes from his office into yours, then a record *will* be required. You can follow a man out to the sidewalk and give him a shot of morphine without making a record; but if the same man follows you back into your office and the shot is administered, then a record must be kept.

We have no further comment to make upon this ruling. We simply believe it to be our duty to bring the matter to the attention of the medical profession for such action as it may think desirable.

It should be understood, of course, that this ruling is not the law itself, but the Commissioner's interpretation of the law. He may be wrong in this interpretation—personally we believe he is. However, it is the duty of every physician to conform, until some decision has been arrived at, in the courts or elsewhere, relative to the exact meaning of the law itself. And it is a good time to be thinking over this whole legislative situation.

O chime of sweet Saint Charity,
Peal soon that Easter morn
When Christ for all shall risen be,
And in all hearts new-born!
That Pentecost when utterance clear
To all men shall be given,
When all shall say My Brother here,
And hear My Son in heaven!

—James Russell Lowell.

DRONES AND DOCTORS WITHOUT SPUNK

I have before me a list of the lot-owners in a summer resort, forty in number. Out of these, four are denominated drones. Why? Because they alone have done and contemplate doing nothing whatever for the advancement of the community. The rest have built cottages or have planned them for the next season; they come there and take part in the life, contributing their share toward the gaiety and the general advancement. These particular four hold their lots vacant, waiting until the push and enterprise of others may increase the value of their holdings. They are of no use and a drawback to the place.

I am afraid some of my colleagues might with equal justice be termed drones in our profession. They never attend society meetings, never write a paper or make an address; never let out to their colleagues any of the wisdom they have acquired in their practice. They do not support the medical journals with their subscriptions; they buy no new books; they practice on the slender store of information they brought from college long years ago, and never seek to replenish their supply or take part in the swift advances made in every department of medicine. Truly, they are drones.

No? You don't like to be so classed? Well, tell us, then, in what way is the medical profession, and through it humanity, the better for your being?

True, you have done honestly and faithfully the work of practice in your community—but, have you learned nothing for yourself

in these past years? Have you nothing gathered from this rich opportunity that should not be allowed to perish with you? Can you not help the rest a bit, in return for the many things you have learned from others?

The ancient ideal of the medical guild was, that the knowledge of each was not his own personal property, but belonged to the whole body of physicians. If every man jealously hoarded his discoveries, the art and science would have been impossible; for, no matter how extensive the experiences and how stupendous the brain-powers of any one individual, these are as nothing beside the collective acquisitions of the whole profession. So, it was held dishonorable for the physician to impart to the laity the secrets of the guild; and equally so for him to refrain from acquainting his brethren with the things he had learned.

The earliest doctors were priests at the temples of the gods; and priests we are today; for, into our hands are entrusted the means of saving human lives. Priests we should consider ourselves—priests of the most divine order. And there is not a trace of superstition in such a belief. The man who feels the sense of trust reposed in him is a safe man to deal with. Feeling this obligation, he will also be anxious to perfect himself in the means of fulfilling it.

The worst thing I find about some of my colleagues is, that they allow themselves to become encrusted. They get into ruts and stay there; they do not try to improve their opportunities and themselves. Just look at it—

The old doctor is feeling the competition of the young doctor. The latter has returned from college with all the newer ways and methods; there is the lure of the novel, the new, the hitherto unheard-of; and people run to him. There is a certainty about these laboratory methods that appeals most of all to the old doctor, and he gets to feel rather blue over the situation. The young doctor is full of confidence, for he is modern, up to date!

Well, Old Doctor, what are you going to do about it? Lie down and let the other man have the field? Give up? Let yourself be pushed out and down? Or have you still enough red blood in your old arteries to make a fight not unwelcome? Is there still some gray matter in your skull that is not worn out—some elastic muscular fibers that are not overwhelmed by the connective-tissue hyperplasia?

Realize, Old Man, what advantages lie in your experience. Here is a case: A woman comes in with a cough—lasted a year—worse at night—no loss of strength or of weight. Microscope finds a few tubercle bacilli in the sputum. Now, shall we make our diagnosis and prognosis on the physical condition, supported by exploration of the chest; or, on the possibly chance presence of a few bacilli? I am rather inclined to think that the old doctor would rest upon the former; the young doctor, on the latter.

More important is the thought that the older man may so easily add to his own priceless store about all that the younger man has acquired. A few books and a visit to the schools, and, with his own knowledge as a basis, he can get far more benefit than can the inexperienced youngster.

I have said this before; and been cussed by some because they read into my words a slur against the elder men. Really, my only fault finding with them is, that they allow themselves to be old, in the sense of neglecting to take active steps against being pushed into the background. Youth has little chance when pitted against wise and active age.

How sweet and gracious, even in common speech,
Is that fine sense which men call Courtesy.
Wholesome as air, and genial as the light,
Welcome in every clime as breath of flowers,
It transmutes aliens into trusting friends,
And gives its owner passport round the globe.
—James T. Fields.

THE EDUCATIVE VALUE OF PAIN

Of all the far-fetched arguments advanced in various quarters against the twilight sleep, the smug, complacent "moral" argument solely affirming the educative value of pain "gets my goat," as the street-urchin expressively puts it. I declare, I don't know whether to take this objection seriously or not. Coming from the medical man, it sounds uncommonly like the last refuge of a cowardly mind that has no genuine argument left.

It is significant that this plea for the usefulness of pain comes entirely from the male and is directed wholly to the pangs of childbirth. Why, pray, this peculiar virtue in suffering in this particular instance? From the strictest viewpoint of philosophy and race culture, I suppose it can be shown that *all* suffering is salutary; first, because all suffering is, directly or indirectly, the penalty of violation of law, and, secondly, because it

subverses the evolutionary principle of the survival of the fittest. Upon this assumption, I suppose, an academic argument might be made against any and all interference with the natural outworking of the penal and evolutionary purposes of pain.

Perhaps, if pain and suffering had been the exclusive experience of the female sex and the means of interference the exclusive possession of the male, this complacent philosophy would have continued to prevail in respect of all suffering; for it is easy to be complacent where somebody else is concerned. But, fortunately for humanity, man shared most of the forms of pain in common with woman, and his own instinctive shrinking from pain (which every impartial observer agrees is much more than that of woman) outweighed his high philosophy and enabled him to compromise with his philosophic conscience to the extent of devising ways and means of evading pain—in which he very kindly has permitted women to share with him.

What is sauce for the goose is sauce for the gander. If pain is a useful and salutary thing, why interfere with it at all? The worse the pain, the more useful and salutary it must be. A toothache must be an invaluable educative experience. Yet, we venture the assertion that the very men who prate so glibly about the salutary influence of the pains of labor, run to the chloral-and-camphor bottle whenever their molar growls, just as promptly and shamelessly as any ordinary mortal. Nobody, so far as we have observed, is advocating a return to the old practice of amputating a leg without administering an anesthetic or, in fact, is suggesting the abolition of anesthesia in operative surgery at all. Still, if the argument of the virtue of pain has any validity at all, it is difficult to see why it does not apply to surgical operations or why it should be supposed to have a peculiar, mystic virtue in the case of childbirth.

The plea only has to be extended to its extreme reach in order to expose its absurdity. If physical pain has a salutary influence not to be canceled with impunity, we certainly must ascribe the same function to mental and moral and social suffering. Much more so, indeed. For myself, I seriously doubt whether sheer physical pain, of itself, ever developed or refined anyone. Animals suffer physical pain, and I suppose nobody will pretend that it ennobles them. Certainly, if any kind of suffering is to be regarded as salutary, it is mental, and psychic, and social suffering.

Away, then, with all agencies and movements looking toward the relief and amelioration of soul suffering and social distress! Let the knife cut as deeply and keenly as it will into the naked soul; it is educative! Let pangs rack the body social with undiminished fury; they are salutary!

The whole attitude is one of medieval superstition. It is, in fact, another phase of the superstition that originally opposed the use of chloroform in labor, for the reason that it violated an alleged divine injunction requiring that women should suffer physical travail giving birth to child. Which reminds one of the objection offered by one of Dickens' smug characters (I rather think it was the alderman in "The Chimes") to doing anything for the relief of the poor, in view of Christ's very plain admonition that the poor we should always have with us.

By the way, it might be pointed out in passing that the supposed divine decree concerning the physical pangs of labor is really—as most of such alleged divine utterances are—a myth, founded in misquotation and misinterpretation. What the Lord actually said to Eve was, "In sorrow shalt thou bear children," meaning, of course, that, since sin had now entered the world, children would be forever a care and sorrow to those who bore them.

Without going into an elaborate discussion of the philosophic aspects of pain, the most common-sense view of the subject should suggest to us that there is now, and is likely to be for several generations, quite enough pain and suffering that cannot be avoided or relieved, to fulfil all the salutary requirements of this poor old world, without staying our hand from the prevention and relief of all that is within our control.

Possibly, as some of these philosophers assert, we really are coddling people a little too much. But to draw an analogy between saving a person the pinprick of vaccination and sparing a woman the agony of childbirth is, to compare small things with great ones, and it will not hold. And, I repeat, there is absolutely no reason why these philosophic considerations should be suspended in every other instance of severe pain and suffering and applied to the pain of woman in childbirth, except, as I have hinted, that the latter happens to be the one form of pain to which man never is likely to be subjected. On the contrary, if there be one form of pain to which a suspension of the philosophic law be applicable, it is the pain of childbirth; for at least one of the

elements in the salutary influence of pain is the deterrent element, and nobody wishes to deter women from bearing children.

For heaven's sake, then, let us abandon this senseless, wicked cant about the salutary value of pain and suffering to the child-bearing woman; or else let us be consistent and refuse to relieve any pain or suffering whatever, on the same grounds—in which case let us go out of business as physicians. By all means, let us thrash out the question of the twilight sleep, frankly and thoroughly. However, let us discuss it on its merits—as to whether its advantages as a savor of pain and suffering outweigh its disadvantages, in the shape of risks and difficulties.

Let us be scientists, not Pecksniffs.

Let the soldier be abroad, if he will; he can do nothing in this age. There is another personage—a personage less imposing in the eyes of some, perhaps insignificant. The schoolmaster is abroad, and I trust to him, armed with his primer, against the soldier in full military array.

—Brougham.

BILLY SUNDAY—A COMPARISON

A Washington (D. C.) physician writes us: "I like you. CLINICAL MEDICINE is the Billy Sunday of medical literature."

That is real praise. Billy Sunday may be sensational, but he "gets there." He is alive, he isn't afraid of saying what he thinks, and he isn't afraid of making enemies. Billy is doing good—great good. His methods are not approved by the hyperconservative—and neither are ours. He doesn't go out to convert sinners from the error of their ways by the crystallized and unsuccessful methods taught in the theological seminaries—and we do not always follow the teaching of the colleges or restrict our methods to those advocated by the great men of our profession.

Billy Sunday is making better men and women. That's the acid test—and that's exactly what we are *trying* to do (with your help)—to make better doctors who are also better men. Nobody can give us a finer compliment than to compare us with Billy.

A FINE SYMPOSIUM ON ANESTHESIA

The present administration of the Chicago Medical Society is making a fine record for itself. Last summer it held in this city a meeting of the Alienists and Neurologists of the United States, which was exceptionally valuable and instructive. January 26, 27, and 28, of this year, it presented a symposium on anesthesia, a subject which is probably

attracting more attention at the present time than any other recently presented to the medical profession. This symposium lasted three days, including clinics during the daytime, and the reading of papers in the evening. One evening was devoted entirely to the twilight sleep; another quite largely to a discussion of the use of scopolamine-morphine in surgery.

The most significant thing about the twilight-sleep discussion was, that all those who read papers were warmly enthusiastic in its praise. While there was some criticism on the part of those discussing the papers, this was generally of a minor character. Several physicians were very highly indignant over the methods employed by the magazines to revive interest in this subject. One critic raised the very pertinent objection, that the Gauss method of twilight sleep was unavailable for the masses on account of its expense. It was declared that to follow out the technic exactly, would cost the average patient fully \$500.00.

One of the most interesting addresses was that of Dr. John Osborne Polak, of Brooklyn, whose report was based upon an extensive experience. Equally interesting and enthusiastic were the papers of Dr. Kurt E. Schloesing, formerly of Freiburg, and Dr. W. Francis Wakeman of San Francisco. Doctor Polak presented a statistical report of 1000 women delivered under the twilight sleep, as compared to 1000 delivered without it. He was able to demonstrate that the method was dangerous neither to the mother or the child; that the percentage of oligopnea and asphyxia was about the same under both methods; that the percentage of still-births was actually smaller under twilight sleep than without it; that there were fewer instrumental deliveries; that there were fewer high forceps operations; that there was no increase in postpartum hemorrhage; that the mother went through the confinement with less shock under twilight sleep than without it; that the puerperium was shorter; that there was less interference with the flow of milk; and that the babies as a rule seemed to be if anything healthier following twilight sleep than without.

When reports like these are read, it does seem as if some of the opposition to painless labor would be broken down, and we believe that it will be.

The objections to the Gauss method, as we have already pointed out, are these: (1) its expense; (2) that it can be carried through safely only by those having special training; (3) that it must be confined to hospitals, and

therefore is unavailable for the masses of American women.

These are very serious objections. Fortunately, however, the Freiburg technic is not final, and there are simpler methods which any physician can employ safely and with equal satisfaction, if he will keep in mind just two things—that danger lies in poor scopolamine, much of which has been offered in this market; and that care should be taken not to give too much morphine, which may interfere with the child's respiration. Insist upon pure hyoscine and pure morphine; and give the remedies in "dose enough" only, and satisfaction to physician and patient will follow.

Symposia like this one on anesthesia are of great value. They help to clear the ethical as well as the scientific atmosphere.

A lie which is half a truth is ever the blackest of lies.
 For a lie which is all a lie may be met and fought with
 outright,
 But a lie which is part a truth is a harder matter to fight.
 —Tennyson.

LET US BE HONEST WITH OURSELVES

As every physician knows, there is nothing new about twilight sleep. Gauss has employed his present methods for nearly ten years. He has delivered thousands of women successfully, and the published reports of the work done by himself and Kroenig show that the method is humane, satisfactory, and safe. Also, during most of the last decade, a modified and simpler method of painless delivery has been in use in America by some thousands of physicians, with equally satisfactory results.

The astounding fact is, that, while these methods have been known to the medical profession all this time, no eminent professor of obstetrics in America, no great American hospital, no great American medical school apparently has paid the slightest attention to twilight sleep—except, perhaps, in the way of condemnation. And now at last, after ten long years of indifference, the profession is waking up! Why? Simply because the laity has taken this matter into its own hands and, through numerous magazine and newspaper articles, is demanding that medical men shall interest themselves in it.

This campaign is having its expected effect. Today it is unusual to take up a medical journal which has not something to say on this subject. Numerous prominent obstetricians are employing the method; within the last few months, hundreds of women have been delivered under morphine-hyoscine sleep

in the hospitals of our great cities; and, so far, I have failed to read the report of a single physician who has practiced the method extensively who does not come out warmly in its praise. There is every evidence that "twilight sleep" is going to take the country by storm.

Now, here is the question every layman will be asking: "If the method was good when Gauss made his first report (and, by the way, the first complete, detailed American report of Gauss's work was published in this journal eight years ago), why, then, has it not been good during all these intervening years? I understand that Gauss's technic has remained practically unchanged. What excuse is there for these ten years of silence?"

How shall we answer—how explain our indifference? The simple truth is, that the profession has been browbeaten into silence. It has been intimidated. Our doctors should have done years ago what they are doing today. Therefore, it comes with a peculiarly bad grace at the present time to make the assertion, as so many prominent obstetricians are now doing, that the present campaign of lay publicity is evil and dangerous.

This exploitation is good at least to the extent that it has compelled the profession to take cognizance of something in which the public is intensely interested and about which people have a right to demand the truth. It is good if it has compelled medical men to study this thing thoroughly, on its own merits, instead of yielding everything unreservedly to the critic and the conservative—to the "ditcher" of any new ideas. We ought to be big enough to see the pitiful inconsistency and ostrich-like hypocrisy of the position some of our leading men are taking in this matter—and about other matters, too, we may add.

The real truth is, that the medical profession owes a debt of gratitude to the lay journals for waking them up to the importance of a procedure of such vital interest to woman-kind. This matter is one in which the public is greatly interested. It has a right to know something about it. It has a right to discuss it. It has a right to examine and cross-examine *us*, and to study our relations to it, especially if the result of all this study shows that we have been dilatory. People have a right to demand that we doctors shall do our duty, if the evidence indicates that we are at fault. *We* are on trial, not they, and the evidence is against us.

In the name of heaven, let us be honest with ourselves and admit that the position

taken by the medical profession, in trying to "hush up" those enthusiastic women, is pitifully weak. Everything new ever introduced in medicine has met exactly this kind of opposition, and especially from the leaders of the profession. It is a good sign of the times that the public can compel us to study problems like this.

Do not assume that we are defending the Gauss "daemmerschlaf" unreservedly or that we believe it will prove to be "the last word" in settling the problem of painless delivery. We are fully aware that it has grave faults that will make its general adoption by the profession impossible. This method has the serious disadvantages of being suitable only for use in hospitals, requiring unusual expertness on the part of attendants, and of being very expensive. In the long run, simpler methods must be developed, which, then, no doubt, will be improved upon as a result of a wider acquaintance with it and its more general employment by the profession as a whole. No obstetrical technic is perfect which is not capable of fairly general application. Our so-called leaders have no monopoly of knowledge; no "stranglehold" on all the available cases. Their opinions are not the last word, and they cannot stand long in the way of progress.

What we need is, an honest investigation of twilight sleep, or painless delivery (call the thing itself by whatever name you please) on its merits alone. Do not let us excuse our own neglect or ignorance by accusing others. Give us more careful, cautious, constructive clinical work. We have had complaints enough. The women of this country have demanded relief from unnecessary pain in parturition. We are going to give it to them—yes, are giving it to them.

LABORATORY FALLACIES

There is a tendency of late to make a fetish of the laboratory methods of diagnosis. Admitting their values and advocating the general resort to this inestimable means of making correct diagnoses, we may at the same time warn our readers against too slavish and indiscriminating reliance upon them.

There are differences in technic and in the men who apply it. The director is busy and leaves the work to his assistants and students. He knows just how it should be done and he has told them repeatedly; he is under the impression that they know it as he does himself—and maybe they do. Maybe not.

In taking the blood pressure, the oscillations of a manometer share those of the mercury with those of the variations in blood pressure. Movements affect the result, and so does the anesthetic employed. Drugs injected into the jugular vein are carried directly to the heart and affect it more than those that first traverse the circulation. Certain salts irritate if they are not first diffused and have formed less irritant chemical combinations with the blood. Undissolved particles may plug the pulmonary capillaries and induce dyspnea and convulsions. Often it is better to inject into the peritoneal cavity or under the skin, the latter being slower in results. Sodium-carbonate solutions, employed to prevent coagulation, may enter the arteries and cause convulsions or even death.

Always the laboratory observations should be corrected and explained by the clinical studies. If the reports do not tally with the condition as observed in the sick-room, the correctness of the work done in one or the other is to be questioned. The clinician has no right to shirk his duties and to place all the responsibility upon the laboratory man. Nor has the latter so far developed his part as to render the clinician a superfluity.

We can't choose happiness, either for ourselves or for another; we can't tell where that will lie. We can only choose whether we will indulge ourselves in the present moment, or whether we will renounce that, for the sake of obeying the divine voice in us—for the sake of being true to all the motives that sanctify our lives.

—George Eliot.

VASOMOTOR SPASM

When men began to study the starry skies, they looked upon the bits of fiery light sprinkled thereover and arranged them in groups according to their appearance from the terrestrial viewpoint. So, in their fancy, they saw in the firmament the giant huntsman with his dogs pursue the great bear; they saw Cassiopeia reclined in her chair; the Pleiades as they bewailed their lost sister; serpents wriggling across the blue expanse; and many a tale of legend and quasi-history they saw depicted in the chance groupage of the luminous spheres. As we of later days learned somewhat of the truth and appreciated the difference between these apparent combinations and the immeasurable distances that separated the stars, the ancient constellations lost their mystic meaning, although they were retained for the sake of convenience.

Closely analogous has been the study of disease and the naming of diseases. To certain groups of symptoms there have been assigned distinctive names, and these symptom-complexes have been looked upon as distinct pathologic entities. Modern study has gone far in demolishing this primitive conception, and we now see two methods of rearranging and classifying the maladies to which mankind is subject.

By one of these methods the etiologic factor is held the cardinal one. By this, we separate the two forms of dysentery, and thereby gain immensely in precision of therapeutic applications. Widely differing manifestations of the activities of the tubercle bacillus, the gonococcus, and the germ of syphilis are brought together and placed under the same specific treatment. Bacillar diphtheria is separated from streptococcic infections, and so precision is secured in many instances where previously our best therapeutics was founded on guesswork.

This casual factor, however, does not cover the entire field. Many maladies depend, not on a single specific germ, but on a variety of causes, none of which may be essential. It is probable that no single germ possesses a monopoly of the ability to induce the malady known as pneumonia. Many diseases to which distinctive names are assigned are not entities, but mere assemblages of symptoms without any definite or essential element. Disease-forms shade into each other. The evolution of a malady may result in its receiving several names during its progress. Names frequently are mere conveniences without distinct separation. How many different designations may be applied to a mitral-valve lesion and its sequences—true and spurious hypertrophy, dilatation, fatty degeneration, pulmonary and hepatic congestion, and so on.

The clinical study of disease reveals certain pathologic conditions, not characteristic of any special malady, but appearing in many different diseases as a feature of greater or less moment. One of the most interesting and most frequently present is vasomotor spasm.

The patient may be suffering from any one of such widely differing maladies as mere chilling from exposure, neuralgia, a choleraic attack or the initial chill of an infective fever. He presents in any of these a vasomotor spasm of the cutaneous capillaries. The blood is driven from the periphery and congests the internal organs somewhere, and we have the evidences of hyperemia there.

Extravasation may follow, and the damage may be serious.

Here, it is the imperative indication to relax the spasm and allow the blood to escape from the swollen vessels and flow back into the huge receptacle formed by the cutaneous vessel system. No matter what the cause—which very often is no longer in operation—or what the distinctive malady, this pathologic condition demands direct, swift and effective treatment. We should no more think of waiting to complete our diagnosis of the name of the disease than we should wait with a child showing a temperature of 110 degrees, to see whether it had scarlet-fever or measles.

The true physician—the clinician who studies his cases, his patients, and does not limit himself to books with printed page and leather cover—learns to recognize this condition in many different instances. He learns also to meet the condition and to remedy it, even so quickly that he may in consequence be unable properly to name and classify his case afterward.

The writer confesses to the possession of many hobbies. Were he to take a night to tell of each, he is sure he might rival Scheherazade in spinning out the lengthy tale. But among the chief of these favorites stands the combination that has done such good work in relaxing vasomotor spasm. Let us build our prescription:

Glonoin—nitroglycerin—trinitrin—glyceryl trinitrate—that many-named wonder to which its more enthusiastic advocates supply still another, namely, "the little giant life-saver." This agent acts more speedily when given by the stomach than hypodermatically. Still better, let it be placed into the mouth and absorbed thence directly into the general circulation, without having first to run the gauntlet of the liver. Glonoin instantaneously relaxes vascular tension, relieving congestions, and suffuses the brain with blood. The effects are evanescent—a few moments, and they subside; but in those precious moments our second agency has gotten into the fight, to wit:

Hyoscyamine. If any reader has learned to distinguish between atropine and hyoscyamine clinically, I should like to see his records or hear his story. Between hyoscyamine and scopolamine, there are certain differences that an attentive student of the human functions may distinguish. Between atropine and hyoscyamine, however, it requires a better observer than this writer professes to be.

Hyoscyamine prolongs, strengthens, and confirms the vasomotor effects of glonoin, but, curiously enough, it does so by following quite another road. While glonoin relaxes the vasoconstrictors, hyoscyamine stimulates the vasodilators. There is no antagonism here, but, acting on different anatomic structures, in an antagonistic manner, they both tend to increase the lumen of the capillaries and arterioles and thus let more blood out. The union is one of the finest examples of scientific prescription building as yet attempted.

Now comes strychnine. This alkaloid arouses the activity of the nerve-centers and accentuates the response of every function to the stimulus of other medicaments administered simultaneously with it. We get a better effect by adding strychnine, as we get a quicker effect by adding glonoin, and a more prolonged effect by adding hyoscyamine. Consequently the interreactions between these three agents are synergistic.

Directing our therapeutics against a disorder of physiologic function, it is essential that we carry our attack just far enough to restore physiologic balance, but do not, by passing that line, induce a disorder of the opposite nature.

Accordingly, we administer each of our three agents in the minute dose of 1-4 milligram, or 1-250 grain, and repeat this every five to twenty minutes, until the vasomotor spasm has been relaxed and a normal balance of the circulation has been restored.

There is something charming in the skilful and accurate handling of drugs in this manner, which is lost by him who pays no attention to his dosing, beyond the facts that the medicine was taken and the patient recovered. He loses much satisfaction who does not hold his remedies in hand as closely as a driver does his trotter.

It is remarkable how often one sees the indications for this powerful combination when once he has recognized the fact of vasomotor spasm and the control exerted over it by this triad. He who is inclined to the occult may therorize over the fact that this, like many of our most successful medicinal combinations, consists of a triad of agencies.

When atropine is injected into the carotid artery, it is carried directly to the cerebral centers and then stimulates the medullar roots of the vagus, slowing the pulse-beats. When it has passed into the general circulation and reaches the heart, it is said to paralyze the

cardiac vagus-ends, and thus to accelerate the pulse. But how can the same drug be a stimulant to one end of a nerve and a sedative to the other end of the same nerve? Or how can we believe that this potent agent affects only a single nerve?

Is it not more rational to believe that, since it stimulates the vagus roots in the medulla, when atropine reaches the heart it there stimulates the vasomotors, and that the acceleration is also a result of stimulation, not of sedation?

If the latter be the case, we may look upon physostigmine as a synergist of atropine, since the former increases the excitability of the vagus, rendering it more responsive to stimuli. But Schiff found that atropine lessened the sensibility of the heart to changes in blood pressure, so that this might be increased or diminished without altering the pulse-rate.

This observation was utilized by Brunton in the treatment of pain or palpitation occurring in persons with high blood pressure or in those suffering the effects of cardiac strain after violent muscular effort. Benefit followed, but only when the atropine was pushed to marked dilatation of the pupils. It was, therefore, a full-dose effect.

In anemics, palpitation and short, quick heart-beat results from the low blood pressure, the ventricles having little blood on which to contract. Then we obtain benefit by administering digitalin enough to contract the arterioles and raise the tension of the arteries. Here, we are likely to witness a disturbance of rhythm, from irregular innervation; and it is one of the delicate tasks of therapeutics to combine a sedative that will regulate this without exerting a general debilitating action. While usually bromides are employed, the milder vegetable remedies are better suited to the need. *Cypripedium*, *scutellaria*, *sumbul*, *valerian* meet the indication admirably.

The disturbance may arise in disorder of some part of the digestive apparatus or of some other function, and then correction of this derangement will quiet the circulatory irregularity.

According to Biehn, arsenic paralyzes the nerve-ends of the vasoconstrictors in the vessels. Hay observed a similar action from potassium. Curare paralyzes the peripheric ends of both vasoconstrictors and of vasodilators. Opium contracts the vessels.

Physostigmine causes a rise in pressure, by inducing tetanic contraction of the muscles of the intestines.

Alcohol paralyzes the reflex and direct sensibility of the vasomotor center, while strychnine stimulates both.

In the darkest hour through which a human soul can pass, whatever else is doubtful, this at least is certain. If there be no God, and no future state, yet even then it is better to be generous than selfish, better to be chaste than licentious, better to be true than false, better to be brave than to be a coward. Blessed beyond all earthly blessedness is the man who, in the tempestuous darkness of the soul, has dared to hold fast to these venerable landmarks.—F. W. Robertson.

THE GENERAL PRACTITIONER AS A "SPECIALIST"

One of our readers enters a vigorous protest against our presentation, in last year's CLINICAL MEDICINE, of a series of articles on "Refraction for the General Practitioner." This, *en passant*, demonstrates over again the old adage that you cannot please everyone. We rather flattered ourselves that we were doing great things in furnishing our subscribers with these very practical and helpful articles, and were preening ourselves upon the fact that we actually had succeeded in arousing the doctor's interest in refraction and in starting a considerable number of them in the work. But it seems that in this one mind we stirred up resentment and disfavor.

Our critic is himself an eye, ear, nose, and throat specialist, and strenuously objects to the general practitioner being encouraged to meddle with refraction or any of the subjects which properly belong to the specialist. He declares that he is scrupulously ethical about restricting his practice to his own specialty, and that he expects reciprocal treatment from the general practitioner. From this standpoint he feels that he cannot lend his support to a scheme for trying to transform the general man into a specialist by mail.

We are very sorry indeed that our correspondent takes this unfortunate view of the matter. We cannot believe that he represents any very general attitude on the part of the specialists; indeed, the fact that his is the only communication of the kind that we have received indicates that he is the exception to the rule, and (if he will excuse our saying so) we feel sure that *his* position was taken hastily and without due consideration; also, that, upon more mature reflection, he will reconsider his position and revise his viewpoint.

To begin with, of course, there was no attempt to transform the general man into a specialist in the eye, any more than the

other articles appearing in the journal represented an attempt to make the practitioner a specialist in the various subjects of which they treated. In common with every other medical journal, we publish what we consider to be interesting and helpful on any and every branch of medicine and surgery, *with the avowed purpose of making the general practitioner better fitted to do these classes of work*; but that does not mean that the practitioner is being pitted against the specialist, or that either he or we have any idea of making him a specialist in any of the subjects in question.

In a certain sense, the general practitioner is obliged to be (forgive the expression) an "all-round specialist." Our correspondent cannot really mean to carry his proposition to the extreme to which he actually carries it; for if the general practitioner refrained from engaging in any branch of work in which there were specialists, his position and his function would very quickly undergo a *reductio ad absurdum*. He could not undertake an obstetric case, for there are expert obstetricians; he could not do any surgery, for there are highly trained surgeons; he could not treat a nervous patient, for there are neurologists; and so on. Nobody really and seriously wishes to argue such an impossible case as that against the general practitioner—not even our correspondent, we are sure.

"No," our correspondent will probably reply, "but there is a point beyond which the general man should not encroach upon the domain of the specialist."

Granted, but—how shall we fix the point? Shall we arbitrarily stipulate a degree of skill which the general man shall be presumed to possess, indicating it by a definite specification of the work that he may do in this and that branch of medicine, and require that he refer everything outside this arbitrary schedule to the specialist? And shall we, moreover, withhold and suppress every bit of information and instruction intended for the general practitioner that transcends this fixed standard? Such a course would be manifestly impracticable; and even if it were practicable, it would be to the last degree disastrous, not only to medicine in general, but to the specialist himself.

The truth is, there can be no limit set to the so-called encroachment of the general practitioner upon the specialist's work except the capacity of the individual practitioner himself. All that he *can* do well, he *may* do, and *should* do. And the more he knows, and

the more he is able to do, the better it will be for the specialist.

There is no more shortsighted mistake than to suppose that the general practitioner's ignorance and incapacity is the specialist's advantage. On the contrary, the specialist thrives in proportion to the intelligence and capability of the general physician. Referred work, as every specialist knows, comes, not from the men who are ignorant and indifferent, but from those who are themselves progressive and ambitious. So that, from the sheerest considerations of policy (which we shrewdly suspect is what our correspondent really means when he says ethics) it is to the specialist's interest that the general man be as widely and highly trained as possible in every class of work.

As to this particular work in which we have been instructing the physician, there is a specially cogent reason for promoting its practice among general practitioners. The fact is that the eye specialists are numerically altogether inadequate to take care of the refraction work that demands attention. Neither our correspondent, nor any other city oculist, can reasonably expect that everybody who needs a pair of glasses will make a trip to the city, to the specialist's office, to be refracted; and if everybody did so, as we have said, the oculist would not be able to take care of them.

In fact, they are *not* taking care of them. Much of the present-day refraction work is being done, as everyone knows, by optometrists, and (worse) by unskilled jewelers, peddlers, and country storekeepers. To keep this work, as much as possible, within the medical profession, where it belongs, is certainly to everyone's interest, including that of the specialist, to whom difficult cases will be referred.

There is another, larger phase of the question of the relation between specialist and general practitioner raised by our correspondent's communication, which, however, we have not time or space to more than refer to here. As a matter of fact, the general man can never properly be said to encroach upon the domain of the specialist; if either does any encroaching, it is the specialist. At all events, the specialist is the outgrowth of the general practitioner, not the other way about. He has no arbitrarily fixed ethical "rights" as against the general man. His position rests wholly upon his ability to outstrip the general practitioner in some special line, which he is usually able to do because he devotes himself entirely to one subject. He

must maintain his superiority by continuing to outclass the general practitioner, not by demanding that the latter fall back or remain stationary. His function, likewise, rests upon his transcendence of the general man's knowledge and skill in some particular line. His office is not to *replace* the general practitioner, even in this special subject, but to *supplement* him whenever and wherever the capacity of the general man ceases to be adequate for the situation.

In the meantime we shall keep right on urging the general practitioner to enlarge his capacity for doing good work, and thereby enlarging his field of usefulness and increasing his income.

My mind is forever closed against embarrassment and perplexity, against uncertainty, doubt and anxiety; my heart against grief and desire. Calm and unmoved, I look down on all things, for I know that I cannot explain a single event, or comprehend its connection with that which alone concerns me. My breast is steeled against annoyance on account of personal vexations, or exultation in personal merit; for my whole personality has disappeared in the contemplation of the purpose of my being.—Fichte.

WHAT WAR WILL DO

What the War is doing, finds a vivid illustration in an editorial announcement published in the *Therapie der Gegenwart*, and this is what it says, even as early as in the second month of this gigantic struggle:

"*Inter arma silent ars et litteræ.* In these times when our brothers and our sons are battling in bloody combat for the greatness of the Fatherland, those of us whom circumstances compel to stay at home are bereft of all tranquility and collection for any scientific work and literary activity. All our doings, all our thinking turn toward the war Thousands of our colleagues are in the field, equally large numbers are busy in the home lazarettes, attending the wounded warriors. The 'therapy of the present' first of all is field-hygiene, war-surgery, treatment of the wounded, and the prevention of epidemics In our subsequent issues, we shall justify our name by meeting the practical demands of the times. . . ."

One only can add that, while the professional periodicals of Germany and Austria-Hungary have not changed in makeup and regularity of appearance, their contents very largely reflect the times, the contributions dealing with the medical problems of the battlefield, while the customary abstruse dissertations fall in the background.

Leading Articles

Pellagra and Its Treatment

By E. H. BOWLING, M. D., Durham, North Carolina

EDITORIAL NOTE.—Doctor Bowling's interesting paper should be read in association with the two that follow. Three different theories regarding the etiology of pellagra are presented, and naturally different methods of treatment are suggested. You will find all of these papers extremely interesting.

I FREELY confess in the beginning that I do not actually know the cause of pellagra. I cannot prove anything, but just as many a man has been hanged on circumstantial evidence I think I can safely say that, after studying and working with more than 200 cases and curing 95 percent of the patients, I have the circumstantial evidence pretty strongly placed; and I am convinced I really know the cause of pellagra and a cure for it.

Pellagra is a disease that will deceive even the very elect, because it sometimes apparently will get cured with any kind of treatment or with none at all. Consequently it is amusing to read of a man, after he has treated some half a dozen cases, crying out "Eureka!" and forthwith rushing into print with the infallible remedy, when, as a matter of fact, we know that more than likely next spring his patients will come to him with an attack in a more aggravated form, and very likely have passed beyond the hope of medical aid.

Pellagra Is Infectious

By reference to the files of THE AMERICAN JOURNAL OF CLINICAL MEDICINE for December, 1910, it will be found that I then claimed that pellagra was an infectious disease, just as typhoid fever. The Thompson-McFadden Commission, which has been studying pellagra at Spartanburg, South Carolina, for three years, has this year come to the same conclusion, that the disease is not contagious, but infectious. I could cite a number of instances to prove this theory, but the following two will do: Mrs. W., a very poor widow, had a very violent attack and, as she was unable to hire any help, she had to do her own cooking. As a consequence, all four of her children contracted the disease, when up to that time they had been as healthy a lot of children as you could find in a day's travel.

John D., a widower, lived alone on his farm. Having no servants and, so, doing his own cooking, he made it a rule to go over to a neighbor's house several times a week and take supper with them; with the result that the neighbor's wife, who was rather delicate, developed a well-marked case, while indications now point to three or four of her children showing the disease next spring.

These examples could be duplicated many times over from my own experience, so numerous, in fact, that I am satisfied in my own mind, beyond any reasonable doubt, that my contention in 1910, that pellagra is infectious, is true. The theory of the semidrying oils (in our case cottonseed-oil) and its various products—led by the brilliant and versatile Mizell, of Atlanta—will work out neither in theory nor in practice. The eruption on the hands is a manifestation of a central irritation, as was first claimed by Niles.

Nason, of Maben, Mississippi, is partly right in his theory, and he would be altogether right if he could forget hookworms as a causative factor of pellagra; however, the contention that hookworms cause pellagra has been proven false beyond argument by a number of observers, notably by Siler and Garrison of the Thompson-McFadden Commission.

My theory of the etiology of pellagra is, that it is caused by a pathogenic germ, not as yet identified (Neither has the germ of scarlet-fever been discovered. But who doubts that it is caused by a germ?), which first finds lodgment in the stomach, where it produces a subacute catarrh. Those who have watched a number of cases and have inquired into their history always will find that the stomach symptoms antedate all other symptoms by from one to three years; and in every case of far-advanced pellagra you will find a total or nearly total absence of hydrochloric acid.

You will not find any pellagrin who has suffered from heartburn for years, unless it was caused by acid fermentation of the stomach contents.

This condition of the stomach, as I claimed in 1910, causes an interference with the digestion, and this poorly digested food going down into the duodenum, constitutes a feeding-ground for all the pathogenic germs that are in the gut; then to these are added the pellagra-germ and they manufacture the ptomaines and leukomaines. These toxins are absorbed by the lacteals and poured into the circulation, thus poisoning the whole blood current. When eventually the blood has reached the saturation point, it irritates the gyrus centralis anterior of the brain, whence we have, first, the eruption on the hands, next on the neck, then on the feet; and if the victim is exposed to the sun and the irritation reaches the sleep-center, we get the sleepless, gibbering idiot, who then, as a rule, is not long for this world.

This theory will account for all the symptoms of pellagra, except the yearly remissions. What causes these heaven knows; I don't. Still, if I may be allowed to theorize, I think I could explain it almost as well as we can explain why in some cases of long-standing chronic malaria there will occur a chill every twenty-one days.

Is it not possible, then, that the natural resisting power of the system—as expressed by the opsonic index—destroys the germs, until there remain not enough of them to produce the outward symptoms, so that it takes a definite period for them to generate enough poison to bring about the central irritation that produces the eruption? I have seen a number of far-advanced cases in which the eruption and scaliness did not leave the hands in the winter, but hung on year in and year out. It is only the mild cases or those in which there is improvement under treatment in which we find the yearly remissions.

This is all theory, but to those who have treated any large number of these patients and who have not cured all of them in a few months with arsenic, in one or the other form, or with jaborandi, gelsemium or hydrotherapy, I appeal to say whether it does not smack of common sense, and whether this theory does not rather fill in with their own experience.

My Own Method of Treatment

Accepting this theory, the treatment is comparatively simple and may be varied

according to the doctor's individual ideas and the indications in each case. I will only outline the plan of treatment that has proven most efficacious in my own hands; however, I will state right now that I have very little of routine treatment and find that I cannot follow the same method for any two consecutive patients. Some time ago I had four patients in one room, and for each one wrote different prescriptions.

One treatment that is routine with me and which I apply to every patient is this: I order for every pellagra patient a tablespoonful of castor-oil every night at bedtime, and I keep this up sometimes for three months—sometimes even during twelve months—until I get the patient well; in other words: if the patient is constipated, it relieves him; if he has diarrhea, presto, change, it does the same thing. If he has diarrhea, it is because his system is charged with the poison and nature is making heroic efforts at elimination, and castor-oil assists in the clearing out; then nature cures the diarrhea.

However, keep up the castor-oil! Once I had a slip of a girl who went, from 90 pounds, up to 160 pounds—and she took a tablespoonful of castor-oil every night for twelve months, and when I told her she might stop she refused to do so; said she felt better when she took it. The castor-oil is an eliminant; that is, it removes the feeding-ground of the germs.

Where Chlorine Water Comes In

Now you want to destroy the germs. If the mouth is not very much inflamed, thus indicating an inflamed condition of the entire alimentary tract, I immediately put them on freshly made chlorine-water, a teaspoonful every two hours. The chlorine water should be freshly made, though, as follows:

Take 40 grains of powdered potassium chlorate, put into a clean, dry, 8-ounce bottle, pour on 4 drams of strong hydrochloric acid, let the bottle get well filled with the yellow chlorine gas, then add water (in small fractions at a time and shaking after each addition) sufficient to make 8 ounces. The solution should be of a deep-yellow color. If it is not of that color, you added the water too soon. Don't use chlorine-water that looks like plain water—colorless, or nearly so.

If there is much gastritis, you will find that the patient can not take the chlorine-water. It will give an intolerable burning in the stomach. If it does this, stop the chlorine-water immediately and undertake to cure the gastritis with a mixture composed as follows:

Fluid extract of condurango . . . ozs. 1 1-2
 Fluid extract of boldo ozs. 1 1-2
 Listerine ozs. 2 to 4
 Carapeptic liquid, enough to
 make ozs. 8

Label: Take 2 drams in some water, three times a day, one hour after eating.

After the gastritis has been cured, then you can go back to the chlorine-water and continue this for a month or so.

When there is much irritation of the bowels, you will find that you will have to discontinue the castor-oil, because under the circumstances it will act so freely that it will weaken the patient.

On the other hand, when I find that the castor-oil does not check the diarrhea after having been taken for a week or two, I stop it and prescribe the following mixture:

Milk of magnesia ozs. 2
 Liquid alboline ozs. 10

Take 1-2 ounce (in water), three times a day, before meals.

This can be varied to suit individual requirements, but at all events keep up the liquid alboline, either alone or in any combination indicated, for its antiseptic and healing influence upon the inflamed mucous lining of the bowels. This treatment should carry you through the stage of acute symptoms.

Now begin with your tonics, and endeavor to restore the acid secretion of the stomach. One of the best iron-and-arsenic tonics I have found is a combination of iron and cacodylate of sodium. Another, oldtime, formula from which I have had great results, and which I still use in a great many cases, is this:

Potassium nitrate dr. 1
 Ferrous sulphate, exsiccated dr. 1
 Nitrohydrochloric acid drs. 6
 Mix, warm slightly, let digest thoroughly, then add:
 Solution of potassium arsenite . . drs. 2

Label: Give 8 drops in water, three times a day, after meals.

When I stop the chlorine-water, I usually begin with the calcium sulphide, as recommended by Mizell; and this remedy fits in right here better than anything I know of, its action being to keep up the antiseptic action in the stomach and bowels with the least irritation.

At this stage of the treatment is where the cacodylate of sodium, hypodermically injected, comes in; for, it helps to restore the hemoglobin in the blood, besides acting as a general tonic. In the acute stages of the

disease, I am convinced, arsenic in any form does no good.

Keep the Bowels Clean

I find that a large proportion of my patients, after the acute symptoms have passed, are constipated despite the castor-oil they take; the cause being that the liver is not performing its normal functions. The bile is nature's cathartic, and when not enough bile is present, there certainly will be constipation.

The medicine that has given me more satisfaction than any other is a tablet composed of the active principles of euonymus, chelidonium, and chionanthus, and podophyllin, strychnine, and bilein. While this is a proprietary medicine, the manufacturers give out the formula; and it is so much better than the nauseous liquid made by using the fluid extracts. I have tried the latter, but very few patients will take it. I have never found anything that was quite as good as a liver stimulant—and what is needed in a convalescing pellagrin is a clean and, as near as possible, antiseptic alimentary canal. But, the very best intestinal antiseptic is bile. Indeed, if people always had plenty of healthy bile in their alimentary canals, our work as doctors would almost be confined to accidents and childbirths.

The treatment here outlined will effect a cure in the average recent case of pellagra, if persisted in long enough. But, then, all our cases are not mild ones. The worst patients I see are those who have been "cured" from one to three times with arsenic and a lot of other things. We shall have trouble with these old chronic cases, or even with recent cases in chronic alcoholics and in debilitated, rundown women, when the treatment I have outlined may hold the disease in abeyance, yet the patient will not get well and we can see that we are gradually losing ground.

However, very few of these cases are absolutely hopeless; but, in order to carry out a successful course of treatment, the patient should be in a well-appointed hospital. Some of these seemingly hopeless patients I have seen brought around and cured by means of hypodermoclysis, as was first recommended by Dr. Joseph Graham, of our city. I administer from one pint to one quart of warm normal salt solution once a day, repeated during one or two weeks. Of course, I keep up the medicinal treatment at the same time.

During this year, I have tried, in three patients who seemed to be past hope, hypodermic injections of pituitrin, 1 Cc. once a

day for two weeks. The results were very gratifying, and I consider the remedy worthy of further experimentation. I gave it only in extreme cases after all other remedies had failed, and all three of the patients made rapid and seemingly permanent recoveries. I certainly should use it again when indicated, and I hope others will give it a trial in their desperate cases; of course, in conjunction with other treatment.

Pellagra Cured by Typhoid Fever

I have known three victims of well-developed pellagra to be taken with typhoid fever who, after recovery from the latter, seemingly were cured of their pellagra. Reasoning that, typhoid fever will cure pellagra and that antityphoid vaccine will keep off typhoid fever, I thought, why would not the vaccine prove of benefit against pellagra. At any rate, I determined to try the scheme on the first favorable opportunity.

The case was not long in presenting itself in the form of a very weak, anemic woman, who had to work hard in one of the mills to help support the family. She did not improve very fast under my usual remedies, so I gave her the injection of the typhoid serum. Her recovery was very rapid and most satisfactory. She is now back in the mill and seemingly cured, although, of course, I still keep her on tonics. All in all, I am well pleased with the experience in this single case. Nevertheless, "one swallow does not make a summer," and, so, it will take further trials to prove the efficacy of pituitrin and typhoid vaccine.

For the nervous symptoms, the medicine that has given me more satisfaction than anything else is a pill of the hypophosphites of lime and soda, although I have had good results from phosphoric acid (dilute) combined with celerina. As to the intense burning of the feet, which occasionally occurs in far-advanced cases—and which is one of the most annoying symptoms of this disease—I get more relief from bathing the feet in a strong solution of magnesium sulphate than from anything else, though, like all the other remedies I have tried, it will sometimes fail.

In the low typhoid cases, when the system seems to be prostrated through the influence of the poison and the condition closely simulates pyemia or sapremia, the one single drug that best meets this condition is fluid extract of echinacea, given in doses of from 15 to 30 drops every two hours, combined with some digestant.

Another procedure that I like is, to give the patient an all-over bath each night and morning, followed by a good rub-down with a coarse towel, and then give a vigorous rub with fine table-salt. I don't always let the patient know that I am having him rubbed with salt, because many of the more ignorant patients possibly would object; but if you write a prescription "*sodii chloridum mensale*" and make him get it from the drugstore he will look on it as a real medicine and will use it faithfully as directed. If, contrariwise, he knew it to be common salt, he likely would not use it or else look upon it with a certain contempt and not implicitly follow directions. Where I can get my patients into a hospital, I always adopt this treatment, and it has proven a very satisfactory remedy.

As to diet, I make no restrictions, but I recommend good fresh vegetables, and especially fruit. I encourage patients to drink all the lemonade they feel like and to eat pickles liberally. My idea is, to nourish and to acidify the system. The only item I prescribe is factitious lard, the chief component of which is cottonseed-oil. I do not accept Mizell's theory; still, I cannot prove him wrong and think it best to avoid the very appearance of doing wrong. Hence, its interdiction. I want to nourish the patient to the highest possible pitch, and for that reason allow the stomach to suggest what it is likely to digest.

The greatest mistake, in my opinion, that is made by many practitioners is in thinking that the patient is cured when the eruption disappears from the hands. If we stop treatment at that point, the chances are that we shall have the same patient the next year, but only with the malady in a more aggravated form. The treatment must be kept up, with only very slight, if any, intermissions, throughout the next period of eruption.

For the benefit of those who have not had much experience with this treacherous malady I will say: Do not look upon the eruption as the disease itself—it is merely a symptom, a red flag hung out by nature to notify you of danger; the eruption is nothing but a manifestation of a central lesion, and if we exert all our energies in trying to subdue the rash on the hands, forgetting, or neglecting the basic cause, our patients will sorely suffer because of our error.

What Are the Signs of Cure?

I never feel that a patient is cured until he begins to put on flesh, his digestion greatly improves, and the roses begin to come back

to the cheeks as an indication that the hemoglobin is being restored to his blood and I can get hydrochloric acid into the stomach. I should advise those who have "cured" patients of pellagra during the last summer to look them over well, and if they can not stand all the tests to put them on treatment *now* while the disease is, apparently, in the nascent stage, making it an object to get them into the best possible condition for resisting the next ordeal.

As this paper was intended to deal only with the treatment of pellagra, I have not taken up space to go into the symptomatology; besides, this malady is now so general and widespread, that it is taken for granted that any physician will recognize a well-marked case. Still, it is best not always to wait for the characteristic eruption to appear, because, if the patient is not exposed to the sun, quite likely there will not be any eruption at all. One of my very worst cases this year was that of an invalid, who never had any eruption at all; nevertheless, there was that flabbiness about the skin of the hands that was suggestive.

Two points I wish to emphasize especially. Under no circumstance stop the treatment when the hands have become clean; your patient is not yet cured. Keep up treatment continuously with more or less regularity until the patient has passed through the next period of eruption. The other point is this. Look upon all cases of chronic indigestion, nervousness, burning in the hands and feet,

and giddiness (especially if this is associated with increased patella reflex and a loss of hemoglobin) with a certain amount of suspicion. If there is pellagra in your neighborhood, you may look out for more, and you had better get your dyspeptic, nervous women in as good shape as possible.

I fully realize that we cannot diagnose pellagra definitely before the appearance of the characteristic eruption; nevertheless, when we have studied and treated a larger number of cases we frequently can recognize certain significant symptoms before the appearance of the rash. I have treated a number of patients as though they did have the disease when I could not diagnose the trouble as pellagra, with the gratifying result of a uniform and in some cases rapid improvement as a consequence.

Within the last two years I have had under treatment 146 cases of well-marked pellagra, not counting those whom I suspected of being infected, and had but 6 deaths, or, a mortality of 4 percent. It may be that my cases were mild; but, if so, I have no desire to see bad ones. I think the mortality, even in our own city, where arsenic was the main remedy, has been recorded as at least 20 per cent.

Arsenic alone, in fact the whole of the old-line treatment, has been tried sufficiently and has been found wanting. Let's branch out on new lines and try to discover a more rational treatment of this terrible scourge that is so violently smiting our fair Southland.

THERE is not anything in a professional way that a doctor is unwilling to do for a patient. He is able to put his sense of smell to sleep at any moment. Filth of all kinds is to him merely so much misplaced matter. He is ready for the most revolting tasks. He shows no more disgust at the foulest form of disease than if it were a rose-cold. He is ready to scrub a slum floor after working all night on a difficult confinement case. And if the husband, a great hulking brute of a 'longshoreman, comes in fighting drunk and proposes to mistreat his exhausted wife, the doctor is ready to wipe up the floor with him as well.—Robt. H. Schauffler.

Pellagra, and the Role of the Sodium Salts

BY GEORGE D. FAIRBANKS, M. D., Brownsville, Texas

EDITORIAL NOTE.—*Doctor Fairbanks believes that deficiency of the sodium salts plays an important part in the etiology of pellagra. He submits strong evidence in support of this hypothesis.*

WHEN taking up the study of unknown diseases, it generally is necessary to jump from causes to effects or else to investigate the latter first and then work up to the causes. In pellagra, a malady which continues to baffle all attempts to ascertain its cause and means of prevention, the effects or symptoms correspond almost identically with the various manifestations of purin toxemia, and this correspondence is so striking that many authorities consider so-called biliousness one of the early stages of pellagra. "There seems to be every grade of intensity in pellagra poisoning, from the mild biliousness suffered by a large proportion of the population of the southern states to the severe developed condition of pellagra." (Hare, "Modern Treatment," vol. ii). Another significant fact regarding pellagra is, that all remedies that seem to have been of any benefit are of the classes which prevent purin formation or assist in its elimination. Atoxyl (a sodium-arsenic combination) retards protein metabolism. (U. S. Hygienic Laboratory "Bulletin" No. 87, Aug., 1913, p. 244.) Atoxyl causes great improvement or cure in many cases of pellagra, according to Forchheimer; and this author also reports benefit from the use of sodium chloride and of sodium cacodylate.

Most treatments for biliousness are alkaline, usually the sodium salts. Dr. Eugene S. Talbot tells us that he found the French people a nation of soda-takers, and that this alkali is needed to neutralize the Gallic blood of acidosis. (AMER. JOUR. CLIN. MED., 1914, p. 564.) Then, again, we learn from Dieulafoy (1911) that at the present time pellagra is very rare in France, and from Lavinder (U. S. P. H. S., Report No. 65, 1911) that Germany and Switzerland have always escaped pellagra; while in Spain the disease never has spread widely. The practical disappearance of the disease from France is mentioned, where once it was endemic and rather widely prevalent. Talbot further states that the relation of pellagra to water has, of late, attracted much attention and demands further investigation. We would suggest looking into the chemical constitution of suspected drinking-waters, as well as the

presence of soda springs in localities where pellagra is scarce.

Many symptoms are common to pellagra and acidemia, such as cutaneous erythema, gastroenteritis, decreased gastric hydrochloric acid, unhealthy, sour-smelling stools, and nervous and mental disturbances. However, the great stumbling-block for this assumption seems to be the fact that pellagra simulates an infectious disease, by a pronounced occurrence in limited localities, in conditions of poverty mostly, and in an apparently increasing number of victims. Opposed to the infection theory, however, is the fact that pellagra has not been proven to be experimentally transmissible, it attacks those in the best sanitary conditions as well as the poorest, occurs at almost every age, though in different percentages, is very widespread in the world in all climates, and occurs where there is no possible chance in our present state of knowledge to trace infection.

Observers at all times have connected pellagra with the diet, and, as the symptoms of it are so similar to the effects of purin poisoning, we think it reasonable to assume that the two conditions may be the same, only differing in severity or type, until experience or discovery shall prove otherwise. "The general opinion in Europe is, that pellagra advanced with the extension of maize cultivation and the more general adoption of this new cereal as an article of food" (Manson, "Tropical Diseases.") "It is a condition, probably, rather than a specific disease, and due to impaired nutrition." (Stelwagon, "Skin Diseases.") "The majority of persons who contract pellagra have lived for years on a mainly vegetable diet." (Voegtlin, U. S. P. H. S.)

Starting with this assumption, then, that pellagra and purin toxemia are related, we find that the causes of acid excess in the blood are varied and numerous, and are both endogenous and exogenous. We have metabolism with its degrees of activity and the excretion of its purin-toxin products more or less faulty. "Large quantities of uric-acid salts may occur in the blood, which are derived from the catabolism of nucleins of the leukocytes." (Stenhouse, "Pathology.")

"Acid wastes of tissue metabolism cause depressing effects upon the higher nerve-centers, and these endogenous purin-bases which are excreted in the urine are derived mainly from the disassimilation, or catabolism, of the voluntary muscles." (Hare, "Modern Treatment," vol. i, p. 168.) "Acidosis is due to oxybutyric and diacetic acids and acetone. They are all related, but the first is found in greatest amount and is probably a normal product of body catabolism, being oxidized as fast as it is produced. When there is an absence of oxidation of sugar-forming material in the body, these acids remain unoxidized and appear in the urine." (Ibid., vol. ii, p. 433.)

Metabolism is considerably influenced by impure air and water, age, worry, exposure, disease, childbearing, and so on; and all these conditions appear to be predisposing factors in pellagra, according to Goldberger, Lavin-der, and Grimm. (U. S. Pub. Health Ser.) "In the puerperal state, there is increased metabolism, and evidence seems to point to autointoxication as the cause of the anemia." (Stenhouse, "Pathology.") "The influence of age upon metabolism is a well-known physiological fact. Children between certain ages show much greater proportional activity in their metabolic changes than do adults or infants." (Guenther, on "Physiology.") In old age, metabolism is less active, but the morbidity rate of pellagra is less, probably for the reason that most persons are attacked between 20 and 40 years of age and die before reaching old age.

Etiology of Neurasthenia. Uric Acid

Between 20 and 40 seems to be the age for neurasthenia, among all classes, rich and poor, of country and of city, but predominating in females, and doubtless results in part from the hurried, nervous existence of our present mode of living. The pathology of neurasthenia is principally nerve-cell exhaustion, owing to destruction of body-nucleins; and in the decomposition (autolysis) of nucleins there are formed certain purin-bases (xanthin and hypoxanthin), which are converted in the body into uric acid (trioxypurin) by oxygen and an oxydase ferment, in the presence of an alkaline solution. (U. S. Hyg. Lab. "Bulletin," No. 59, Dec., 1909, pp. 66, 104, 105, 129.) "Acids, even the weakest, are found to prevent the action of animal tyrosinase (oxydase), while the effect of the addition of small amounts of alkali is, to cause a distinct increase in the activity of the ferment." (Ibid., p. 81.) "The metabolism of proteid

animal food tends to render the blood and tissues acid, through being rich in purins, which, when not properly oxidized and excreted, circulate in the blood as urates, acting as poisons and producing gout in its various manifestations." (Hare, "Modern Treatment," vol. i, p. 375.)

"Uric acid is not an intermediate product in the formation of urea and never is normally found in the blood, but circulates as soluble sodium quadriurate, which, by accumulation, becomes the less soluble biurate and is deposited as such in the tissues, where it acts as a local irritant, and frequently is found at autopsies, evidently having caused related symptoms during life. Large amounts may circulate in the blood without giving rise to any serious disturbance, until precipitated from some cause." (Stenhouse, "Pathology.")

Physiologically, the blood does not contain any appreciable quantity of uric acid, but in gout large quantities are found as acid urates, formed by a double rearrangement between acid sodium phosphate and the neutral urates held in solution and become poorly soluble; but the addition of alkalis easily dissolves them when they appear in the urine. In pernicious anemia, fevers, and acidosis, the alkalinity of the blood is decreased, and in cholera, according to Cantani, the blood may even become acid. (Sahli, "Diagnostic Methods," pp. 855, 671, 736.)

Economic Balance of Sodium

Bearing on this acidity and in reference to what is stated further on concerning sodium, it is remarkable what improvement has been attained in the treatment of cholera by the infusion of hypertonic sodium-chloride solution. (Hare, in his "Modern Treatment," vol. ii, p. 822, mentions Fuller's alkaline treatment—sodium bicarbonate—for acute articular rheumatism, which was based in part on the theory that it restored the alkaline condition of the system, which had become acid; and this treatment still is in use generally today.) Again, Dr. Curt von Wedel (*U. S. Med. Jour.*, July, 1912) states that in burns an intensely acid toxin is produced, which may be neutralized by sodium bicarbonate used locally and internally, to prevent congestion of serous and mucous surfaces and the meninges. It is stated that the vomitus, stools, urine, and other secretions, as well as the burned surface, are charged with diacetic acid and various other organic acids. These several references to acidity of the blood are given to show that the condition does occur, in localized parts at least, and that the ad-

ministration of a sodium salt always is beneficial.

If sodium chloride is withdrawn from the diet of otherwise healthy individuals, it produces lassitude, incapacity for work, digestive disturbances, and so on. (Hare, "Modern Treatment," vol. i, p. 375); and vegetables contain large amounts of potassium, which when ingested in considerable quantities, reacts with the sodium chloride present in the food and body and forms salts foreign to the blood, which are promptly excreted by the kidneys. As a result, the normal amount of sodium chloride is lessened; and, as inorganic salts are bound up in the structure of living material and necessary to normal reactions, the need of sodium chloride is particularly felt by animals that live on vegetable food. (Guenther, "Physiology.") This reaction continuing, in time reduces the sodium equilibrium of the body the same as carbon or nitrogen equilibrium is reduced.

It is a significant fact that starvation produces a reduction of sodium equilibrium and a lessened resistance to purin poisoning. During starvation, the body clings to its salts, and the amount of sodium chloride excreted soon falls to a low figure, while, if ingested in superabundance, it is promptly excreted. So, we have nitrogen and carbon, oxygen, water, hydrogen, and salts equilibrium. (Guenther, "Physiology;" and McGlannan, "Chemistry.") "Salant and Rieger found the resistance of rabbits to caffeine (a xanthin-purin) to be diminished when the animals were starved for four or five days, while the fatal dose was about 30 percent less than for well-fed rabbits." (U. S. Hyg. Lab. "Bulletin," No. 89, June, 1910, p. 12.)

In this connection, we wish to call attention to the fact that many of our foods contain xanthins in large amount, and the *Congressional Record* states that the caffeine consumed annually in the United States, in the form of drugs, tea, cacao, coffee, alone amounts to 16,254,221 pounds.

All hydrochloric acid in the gastric juice is derived from the sodium chloride of food by selective absorption of the cells of the gastric mucosa, the alkali passing to the blood and the acid to the lumen of the glands. (Guenther and McGlannan.) All pellagrous patients suffer from diminution or complete absence of pepsin and hydrochloric acid in the stomach, and the diarrhea sometimes is promptly checked by the administration of these agents. (Hare, "Modern Treatment," vol. ii.) Sodium chloride given internally has been recommended by Lombroso, especially

for pellagra in children (Voegtlin, P. H. S.), and also by Forchheimer, but the latter considers it too irritating to be satisfactory.

Alkalinity of the Body-Fluids

The alkalinity of the blood is due to sodium bicarbonate and sodium phosphate (McGlannan). When sodium bicarbonate is ingested on a full stomach, it is absorbed as carbonate and renders the blood alkaline. (Kiepe, "Therapeutics"). Therefore, it is reasonable to infer that an absence of these sodium salts may decrease the gastric juice; and that is what we find in pellagrins, as before stated. The saliva is normally alkaline, and, on becoming acid, will cause stomatitis. (McGlannan.) The bile-salts are sodium glycocholate and sodium taurocholate, and the activity of the pancreatic secretion depends upon an alkaline medium, as do all the tissue-fluids. "Alkalis decrease the acidity of urine, increase urea-nitrogen and decrease ammonia-nitrogen, promote oxidation, and *heighten the bactericidal power* of the body-tissues by *increasing the alkalinity* of the body-fluids." (Hare, "Modern Treatment," vol. i, p. 828.)

Alkalinity is necessary for the activity of oxydases (Kastle, U. S. P. H. S. "Bulletin"), and these ferments are found widely distributed in the tissues and secretions of animals (milk, saliva, leukocytes, etc.). (Hyg. Lab. "Bulletin," No. 59, Dec., 1909, p. 119), while the oxygen for their use is carried by the iron of the hemoglobin.

On pages 32 and 33 of the above-mentioned bulletin, it is pointed out that oxydases are concentrated in the epidermal and exposed structures of the body, and it is thought that their physiological role both in animals and plants is one of defense against invasion by microorganisms. This would seem to be an important point with reference to pellagra, as in this disease the epidermal surfaces, including the gastrointestinal tract, are always particularly affected. On pages 70 and 81 of the bulletin, there is this statement: "Tyrosin is an end-product of proteolysis and, when acted upon by the oxydase (tyrosinase) in alkaline solution, it produces the pigment 'melanin,' and a small quantity of this melanin melted with the purest sodium hydrate from sodium gives the odor of indol and skatol." This suggests that the absence of the odor of indol and skatol in the feces of pellagrins may be owing to acidity of the stools preventing this tyrosinase reaction; also, a decrease of alkalinity in the blood supply of the epidermal surfaces may interfere with the activity of the oxydases concentrated there to protect

the body from microorganisms, allowing the latter to flourish, with the consequent irritation and inflammation.

This is the most rational explanation of the peculiar erythema selecting exposed surfaces, since those surfaces naturally accumulate more microorganisms than do surfaces protected by clothing. According to Stelwagon ("Skin Diseases"), the sunlight-theory is untenable, for the reason that sometimes erythema is seen on the feet of those pellagrins who are footclad; but, the feet always accumulate many germs, notwithstanding they are covered. The decrease of alkalinity of the blood going to the gastrointestinal tract may account for a lack of oxidase activity there, with its invasion of bacteria that have passed the stomach because of its lack of hydrochloric acid.

Finally, we wish to cite once more the Public Health Service "Bulletin," No. 59, on "The Oxidases," as follows: "The catalase value of normal blood was found to be 23, whereas for blood in certain diseased conditions the catalase value was considerably less than normal, ranging down, in tuberculosis, to 10 to 13; in nephritis, 8 to 13; and in carcinoma, the remarkable fall to 1.3 to 2.1.

Consequently, wasting diseases may well be held to be a predisposing cause of pellagra, as Goldberger, Grimm, and all other investigators universally agree."

To summarize: It has been the object of this paper to draw attention to facts which tend to support the theory presented: namely, that pellagra is due to a lack of sodium salts in the economy.

It seems that in conditions where sodium salts are constantly ingested pellagra is rare, unless the amount ingested is overbalanced by the amount excreted. It appears that this may occur under vegetable diet, in starvation, disease, and so on.

Secondly, lack of sodium salts evidently interferes with the excretion of purins, allowing them to accumulate in the blood and to cause irritations similar to those seen in pellagra.

Third, the decrease or absence of hydrochloric acid in the stomach results from a deficiency of sodium salts, and

Fourth, a diminution of the sodium salts reduces the alkalinity of the blood to perhaps the point of acidity, in the excretions at least, and this interferes with the activity of the oxidases in their protective function against invading microorganisms.

Pellagra: Its Etiology, Pathogenesis, and Treatment

By E. M. PERDUE, M. D., Kansas City, Missouri

Professor of Tropical Diseases, Eclectic Medical University

EDITORIAL NOTE.—Still another hypothesis concerning the etiology of pellagra is presented by Doctor Perdue, one proposed by two distinguished professors in the University of Rome. You should read Doctor Perdue's able exposition of this theory, presented herewith.

PELLAGRA is a chronic intoxication caused by colloidal silica in drinking-water.

There has been so much written of late in medical journals and in the bulletins and reprints of the Public Health Service that is erroneous and misleading that the foregoing bold statement is justified, in an attempt to arrest the attention of the profession.

Pellagra is a disease strictly localized and contracted in zones where the water commonly drunk by the people is in contact with an argillaceous terrain.

It follows, therefore, that pellagra is not dependent upon maize alimentation; that it is not caused by infestation with filaridæ; that

it is not a parasitic disease transmitted by the "buffalo-gnat" or by stomoxys calcitrans.

The conditions necessary for the development of pellagra are: a soil or water source derived from disintegrated granite, feldspar or serpentine, or from allied rocks containing no alkalis, no intervening sedimentary rocks containing the alkalis or especially the carbonates, no organic matter which would precipitate silica, and no treatment of the water supply with alkalis, and that the populace commonly resort to and use this supply.

These conditions obtain on the slopes of the Alps and of the Appenines in Italy, on the eastern slopes of the Alleghany mountain system in the United States, and in a few other

isolated sections of the United States as well as other parts of the world.

Both colloidal and gelatinous silica are readily absorbed from the digestive tract. They enter into colloidal combinations with the proteid substance of the tissue-cells. This colloidal combination extracts water from the tissues, decreases the sodium-chloride output in the urine and frees hydrochloric acid, with resulting increased intoxication.

The most marked characteristic of the pathogenesis of pellagra is the drying of the tissues. The skin becomes so dry that the hair falls out, while desquamation is a prominent diagnostic feature. The pleural, pericardial, and peritoneal fluids dry up. The muscles and tissues become dry and sticky because of the exhaustion of the watery constituent. The nervous system becomes so dried out that there is present, first excitement and then prostration and paralysis.

This drying process can be hastened by exposure of parts to the atmosphere and sunlight. Since the acid intoxication is in combination with the tissue-cells, those cells which are exposed to air and sunlight become dried out and the acid toxic fluids concentrated. The cutaneous manifestations of pellagra are visible above the collar and below the wristband. In patients in whom the acid concentration is great, the cutaneous manifestations appear early in the spring or summer; in those in whom the concentration is less, these manifestations appear later in the summer.

The enumerated conditions of the cutaneous manifestations are characteristic of a chronic intoxication and negative any other theory. To an epidemiologist trained to observe the obvious in clinical research, these conditions would upset any preconceived communicability.

The classical triad in the symptomatology of pellagra consists in cutaneous manifestations, digestive disturbances, nervous disturbances. We have briefly discussed the pathogenesis of the cutaneous manifestations. In the pellagrous patient, the digestive fluids are dried up. The walls of the stomach and intestine are very thin. The fluids necessary to the formation of digestive fluids and for the promotion of dialysis and assimilation are wanting. Through nature's attempt to supply the lacking water, thirst becomes insatiable. The material in the stomach and intestine goes undigested, undergoes putrefaction, and the intestine becomes distended with gas. The intestine with its accessory

glands becomes congested and hyperemic and the mucosa and serosa marked with punctiform hemorrhage. The serous membranes become dry and parchmentlike.

The nervous disturbances have the same characteristics of exhaustion of water: first hyperesthesia, this followed by prostration and paralysis.

Experimental and Clinical Proof

The complete history of this intoxication has been worked out experimentally and clinically. The animals used in the experiments were guinea-pigs, rabbits, dogs, and monkeys.

The experimental animals were injected with colloidal silica, gelatinous silica, colloidal and gelatinous silica with gelatinous alumina added, and colloidal and gelatinous silica with the addition of the common alkalis. They were also fed all of the substances named, mixed with their daily ration. In a separate and distinct experiment, animals were also given water from a pellagrous zone.

In all cases of injection of silica, ingestion of silica, and drinking of water from a pellagrous zone, the animals presented, in life, the classical triad of pellagra, as mentioned, and when dead of the intoxication they showed at autopsy the classical lesions of the disease.

Animals made sick from the intoxication responded readily to the indicated treatment. At the same time pellagrous patients from a pellagrous zone manifested the same symptoms and responded to indicated treatment without change of diet, occupation, domicile or sanitary environment.

The conclusions set forth above are the results of the research of Alessandrini and Scala, of the University of Rome. These investigators published their preliminary note in May, 1913, and it was translated into English by the writer and published in Bulletin 1 of the Eclectic Medical University at Kansas City. Their completed monograph on pellagra was published at Rome early in the summer of 1914.

The writer has the personal letter from Professor Alessandrini, bearing date of May 10, 1914, announcing the coming publication of the completed monograph and requesting its translation and publication in English. As soon as the monograph was published, Professor Alessandrini forwarded two copies. This monograph contains 176 pages. It is handsomely illustrated. We have over half of it translated.

One of the most striking things in this monograph is the parallel comparison of

experimental and human pellagra. This we have translated and give below in full.

Symptomatology of

Human Pellagra

Onset of the disease, slow, progressive, only rarely has a rapid course.
Walk uncertain, slow.
Presence of symmetrical erythema, with frequent formation of scars and sores.
Epidermic desquamation in large scales.

Skin desquamated, thin, clear, brownish-red, for the most part atrophic.
Presence of telangiectasic spots.
Tongue with desquamated spots.
Eyes open, clear, weak.
Thirst insatiable.
Loss of appetite, or else immoderate hunger.
Diarrhea.
Pruritus.
Tremors of the upper limbs and the head.
Fibrillar contracture.
Reflexes exaggerated.
Hyperesthesia, overexcitation.
Depression.
Squatting position, with flexion of the thighs on the chest and the head inclined.
Spastic paresis in the prevalence of spastic paraparesis.
Paralysis of the lower limbs.
Hyperthermia.
Oliguria.
Albuminuria and indicanuria.
Concomitant ocular affections.

Intoxication with Silica

Onset of the disease, slow, progressive, only rarely has a rapid course.
Walk torpid.
Symmetrical depilation; erythema, with formation of scars and sores.
Epidermic desquamation in scales more or less large, thin, clear.
Skin desquamated, thin, clear, reddened, for the most part atrophic.
Presence of telangiectasic spots.

Eyes open, clear, weak.
Thirst sometimes insatiable.
Loss of appetite, or else hunger.
Diarrhea, sometimes bloody.
Pruritus.
Tremors of the fore limbs and the head.
Fibrillar contracture.
Reflexes exaggerated.
Hyperesthesia, overexcitation.
Depression.
Squatting position, with flexion of the thighs on the chest and the head inclined.
Spastic paresis in the prevalence of spastic paraparesis.
Paralysis of the hind limbs.
Hyperthermia.
Oliguria.
Albuminuria and indicanuria.
Concomitant ocular affections.

Pathological Anatomy of

Human Pellagra

Predominance of muscular atrophy, of points of congestion and of hyperemia.
Cadaver emaciated.
Thin panniculus adiposus.
Musculature flaccid, atrophic.
Heart flaccid, easily torn, pigmented.
Liver for the most part congested.
Renal hyperemia and turbid new swelling.
Stomach and intestine with the serosa hyperemic, with venous arborization.
Thinness of the gastric walls, through atrophy of the muscular coats.
Thickening of the pyloric region.
Stomach and intestinal tract distended, full of gas or of a frothy greenish-yellow liquid.
Gastric mucosa hyperemic, congested, marked with hemorrhage.
Intestinal walls thin.
Intestine of moniliform appearance.
Mucosa of the duodenum and of the small intestine covered with mucus, with hyperemic and hemorrhagic zones.
Large intestine with ulcerated mucosa.
Peyer's patches edematous, swollen.
Hyperemia of the meninges and of the cortical substance of the brain.
Opacity of the membranes.
Cerebral substance easily ruptured, edematous.

Intoxication with Silica

Predominance of muscular atrophy, of points of congestion and of hyperemia.
Cadaver emaciated.
Thin panniculus adiposus.
Musculature flaccid, atrophic.
Heart flaccid.
Liver for the most part congested.
Renal hyperemia and turbid new swelling.
Stomach and intestine with the serosa hyperemic, with venous arborization.
Thinness of the gastric walls, through atrophy of the muscular coats.
Thickening of the pyloric region.
Stomach and intestinal tract distended, full of gas or of a frothy greenish-yellow liquid.
Gastric mucosa hyperemic, congested, marked with hemorrhage.
Intestinal walls thin.
Intestine of moniliform appearance.
Mucosa of the duodenum and of the small intestine covered with mucus, with hemorrhagic zones, and extensive hyperemia.
Large intestine sometimes with ulcerated mucosa.
Peyer's patches sometimes edematous, swollen.
Hyperemia of the meninges and of the cortical substance of the brain.
Opacity of the membranes.
Cerebral substance easily ruptured, edematous.
Marrow of the long bones brownish-red.

The prophylaxis, or, more properly, the prevention of pellagra is very simple and consists in the treatment of water-reservoirs with broken limestone.

Treatment of Pellagra, with Clinical Illustration

The treatment of pellagra as an acid intoxication is the provision of proper alkalinity. For this purpose, trisodic citrate (sodium citrate) is recommended as the best. One cubic centimeter of a 10-percent solution is injected intramuscularly in the gluteal region. These injections are made daily at first and later at longer intervals. Usually there will be about one-half as many injections as there are days elapsing during treatment.

Further to illustrate the diagnosis and treatment, we translate again from Alessandrini and Scala, giving case No. 7 of their series:

"Tini Annunziata, widow of Giovanni, living in Gualdo Tadino, division of Grello, region of Broccaro, age 46 years. Was a pellagrin for about ten years. Gastrointestinal disturbances predominated, and every year had the classical vernal erythema only in the form of a gauntlet. There was here no place for treatment, and no attempt had been made to alleviate her suffering with medicines. She had always lived and worked as a country woman in the country where she now resides. She has borne 13 children, of whom only 5 survive; has never aborted, has never suffered from sickness worthy of note.

"The principal symptoms which she presented at the beginning of treatment were the following: Grave loss of appetite; marked sense of weakness, accompanied by a vague pain in the abdomen, especially in the epigastrium; also, muscular pains, which did not permit her to work and prevented her lifting even very light weights and wearied her at once if she tried to walk. The tongue was denuded of epithelium and covered with deep fissures; the lips were whitish and denuded of epithelium, especially at the corners; the eyes were tense, lucid; the patellar reflex was exaggerated; there was tremor of the hands. The skin of the back of the hands and of the lower part of the forearms was pigmented, dark, furrowed with whitish streaks, thin, shining.

"Commenced the injection of 1 Cc. of 10-percent trisodic citrate on the 27th day of March and continued (except for a short interruption from the 16th of April to the 5th of May) to the 28th of May.

"From the first injections, commenced to show Improvement, as the gastric and muscular pains diminished and the appetite returned. After 10 injections, said she felt stronger and that her knees no longer gave way; in the morning, she arose from bed refreshed and no longer experienced the sense of weariness which had tormented her before. Could lift without weariness of weight; had greater resistance to fatigue. Also her spirits were much improved, the hope of cure returned and with it a good humor and appetite.

"The improvement ran a progressive course, and when the injections were suspended there was no disappointment, since, in a short time, we saw almost the total disappearance of the disturbances present uninterruptedly for so many years.

"The duration of the treatment was 63 days. The number of injections were 34. Dynamometry: right, from 14 kg. to 19 kg.; left, from 14 kg. to 18 kg. Her weight increased, from 46 kg. to 47.2 kg.

"There was in this patient a disappearance of the subjective symptoms and an increase in strength and weight. The erythema appearing constantly and periodically for ten consecutive years did not return in the summer of that year, nor the next."

As a result of this research, the etiology and treatment of pellagra are placed upon a sound, rational, and scientific basis. Prevention is simple, cause no longer obscure, and treatment within the means of every practitioner.

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An Old Doctor's Life Story

An Autobiography

By ROBERT GRAY, M. D., Pichucalco, Mexico

EDITORIAL NOTE. Last month we began the publication of this autobiography, which in every respect is distinctly unusual. It is not the usual trite story of medical successes, but rather an intimate record of the unfolding of an unusual life. Doctor Gray was born in the Old South, was educated in France under the old regime, fought through our Civil War on the Confederate side, and soon after plunged into the very depths of tropical Mexico, where he spent his life. We promise you in this series one of the most interesting stories it has been our privilege to offer.

[Continued from page 123, February issue]

AT LAST came the time for me to go to France to study medicine, and though I pleaded against it, my father was inflexible. Hence, I struggled with the requisite studies almost sleeplessly. The wonderful start my kinswoman and uncle had given me rendered the preparatory studies both simple and easy, my memory being toned to an incredible degree. Early one day my Latin professor found me lounging in the library, reading a book I fancied. He accosted me abruptly: "Robert, why are you not studying your Latin lesson?" "I know the lesson, sir," was my laconic reply. "Come with me," and he conducted me to his private office, to put me through a crucial test. At the end he said: "Whenever you are thus master of your lesson, employ the other part of the studying-time as you like."

What I had learned at home and the extensive general reading I had industriously pursued obviated the almost maddening difficulties that I saw others struggling to overcome; and this has since satisfied me that such early training has a value above any money price when any student enters any college. The time I was able to filch from actual study enabled me to acquire quite a store of knowledge from the treasures of the library, that was serviceable in front of my French professors many times; they assuring me that most American students were very indifferently read and had mastered their preparatory studies imperfectly, often in such a small degree as to possess little helpful value.

Time, that hastens all toward eternity, called the hour for me to sail over the Atlantic; and I embarked the same as others who

go abroad in quest of whatever fancy or necessity prompts them to seek.

Gay and Mystic Paris

Something magnetic clusters about the luring halo of memory that reverts to Paris tonight, and holds me spellbound in the magic mystery of a beautiful dream, whose gilded enchantment has vanished.

I had a wildly furious voyage on the storm-swept Atlantic, immune from sea-sickness, which I was told no other passenger escaped. I reached my lodging, in the Rue St. Dennis, in the darkness of a drizzly night, and found my quarters in the upper story of a building regarded tall in those days of 1850. The wind arose in the night and dissipated the fog and clouds. I awoke after a refreshing sleep, to find the world aglow with resplendent beams of limpid sunshine, unable to recall a morning in all my life when I was in bed at sunrise; and I saw, from my lofty room, what flits in my haunted memory tonight as pantomimic Paris, in the veritable reality of glorious magnificence, the view not reaching the slums of squalor and wretchedness, overbrimming in Paris in that now distant age.

I had my rooms and meals in the same house, far more desirable than in the first hotels, with the internal quiet of a private family; the arrangement having been made by a Frenchman living in New Orleans.

Getting a Medical Education

I was the bearer of letters to Doctors Blanche père and Henri Roger, of the hospital for sick infants, and to Doctor Hipolyte Hérard, former president of the Academy of Medicine and honorary physician of the Hotel-Dieu, who were requested to put me into the best channels of practical study. They all gave me a most cordial reception, because, I suspect, the letters I carried them recommended me to their attention in a higher degree than I deserved.

I expected, naturally, to be placed in the best college; but they advised private instruction; attendance at lectures; clinics; hospital observation, especially at the hospital of charities, where I might soon get an elaborate insight into the extensive treatment of promiscuous diseases—lessons no college in France could remotely approximate—while I could learn all there was of infantile medication, at the hospital for sick infants, from Doctors Blanche père and Henri Roger, and their assistants; Doctor Hipolyte Hérard guiding me in the way to all needful surgical

knowledge, in the meanwhile. These men assured me that, besides all just stated I should have annual visiting-tickets to the best hospitals, where I should meet startling scenes of which I never should read in text-books nor hear of in any college. I was informed that such valuable service would not be gratuitous, but that it would cost no more than the regular collegiate courses, with the helpfulness they would cheerfully lend me.

I accepted their proposition with spontaneous alacrity and went about the performance with unbridled will, less than a month being required to have every feature in perfect working order, thus enabling me to learn in another month what I never could have learned as practically in college. The truth is, that I started where a college graduate would be fortunate to begin, on the very threshold of a practicing student. While I was not actually practicing, I was seeing the practical work in process and hearing it fully explained—lessons too impressive to be readily forgotten, as those read from books or heard from the lecture platform.

I had the best of advice and all necessary warning against the perils that beset the innocents from abroad, footloose amid the sharks and vampires of Paris; which I was assured would be much less than if I was blended with dissolute students in a college; as my unavoidable instructive companions would all be men strenuously laboring during long hours of exacting servitude, whose positions depended on propriety and rectitude of life when off duty—certain never to attempt to mislead me—some one of whom I might invite to accompany me when I wished to go to the theater or elsewhere.

I was thus domiciled and located in Paris to remain four years, yet, with tasks outlined to occupy all that seemingly long lapse of time, with the certainty that I should have to pass a rigid examination, in order to gain a high-grade diploma, that no mere collegiate courses could attain; but I felt confident I could effectually master all lessons set for me to learn.

As progressive science has rendered most of what I learned there obsolete, even modern surgery having outstripped the best practice of that day, I shall not attempt to detail the elaborate magnitude of my studies, reserving such space wherein to portray the subtle insinuation of modern medicine, that has superseded the practice I there learned, in a degree that it now has none but a comparative clinical value. Such comparison will be

presented when I come to tell the reader how I became switched off from the old to the new practice, and the part my early friends in Paris took in my radical conversion.

Doctor Henri Roger was visiting doctor to the hospital for sick infants when I arrived in Paris, but was permanently installed in the venerable institution during my period of probation; and both he and Doctor Hipolyte Hérard exercised an indomitable influence over my course of proselyting, from their early teaching to *improved galenic medication*, which will be elaborately outlined in its time and place.

Why This Story Is Told

Should this essay realize even a very limited fraction of its primal object—lend a dim ray of guiding light to a very few rural practitioners, who have not possessed the precious advantage of profound instruction in the widely varying ramifications of critical medicine nor the startling experience of the hospitals of Paris, a big slave plantation among feverish bogs, the horrors of the Confederate army, and the sickliest tropical belts of the continent, filtered into more than three-score years—such object might be most effectively facilitated by a liberal illustration of the help and influences that impelled me to become master of whatever useful knowledge I may have acquired.

Possibly I am pondering boldly, maybe extravagantly. Yet, I am able to contemplate serenely the arduous task I have assumed. For my own part, left alone to myself, unsolicited by men who scientifically rank high above me, no page of this ever would have been written. Maybe I too much underestimate what I should be able to do. Yet, while I have not nearly approached the personal features most painfully pathetic, sharp unbidden pangs piercing as the scorpion's sting have thrilled my long apathetical sensibility when I saw "sister's" and "sweetheart," flung on the page beneath my pensive eye; and I felt the sterile wells of my heart, so long sapped by dry sorrow, troubled as if they fain would start the sullen tear. But too much of this. Let it pass. It may be I deserve the pain, if such there be. Or is it that dotage has deeply merged into the pusillanimous driveling of second childhood? The amiable Doctor Osler would have electrocuted me more than a score of years ago; yet, here I am, still coquetting with phraseology, with but fifteen mile posts between me and the century line. And we shall see, as we progress, what measure of

cogency may be conjured into practical array as there is subject-matter to formulate.

I presume that the reader may be wondering at the absence of the recounting of forbidden adventures in Paris. The truth is, that the house where I lived was so well ordered and eminently respectable that the very servant girls appeared to be paragons of virtue. And my first visit to the pest hospitals cured me effectively of all desire to go in quest of adventures among the demimonde. The first and most serious lesson inculcated by my friendly guardians was, to beware of intrigues with females of Paris; and such lesson was followed immediately by the visits to the pest hospitals, where the teaching was more than amply confirmed.

The Quintessence of Sweet Womanhood

A young woman of charming loveliness made long-protracted visits with my landlady, ever amiably friendly with me, frequently supping at my table, where we lingered after meals, alone, many a time, in animated conversation. Still, she never swerved from a rigidly correct prudence, in look, act or word, innocently manifesting, without a conscious effort, purity of mind and strength of heart. In a word, she was one of those rare women we sometimes meet, with whom it is impossible to associate a bare thought of clandestine relations, much less to insinuate a remote hint of any shade of informality; an eye that would transfix the libertine and droop his ogling gaze to the ground. I never knew anything definite about her, more than that she was not of Paris.

She told me nothing of herself nor of home; and my landlady never spoke of her after she had presented me to the subtle charmer. But this is not meant to imply that she had any design to charm me; for she certainly never indicated a mere dreamy thought of any such purpose. She seemed to have no male friends in Paris, or, at least, none such ever appeared when I was in the house. I have no idea what my landlady had said to the girl of me; but she could know nothing more than what her French relative wrote her from New Orleans, when advising her to hold my lodging prepared for me. I told the girl I was engaged at home, where I expected to marry some time. She never told me whether she had ever been the victim of Cupid or not.

But, at all events, she was a precious recreation to me, with her voluble, elastic French,

simply perfect in diction and clear as a soft clarion note, and a musical silvery laugh that lured one to linger after the hour to part. It seemed that she had read everything of leading interest and remembered the gist of every book. Certainly, hers was a precious friendship for a lonely wayfarer, far from kindred and home, in a strange land, lending a fine moralizing influence, tending to stay the impulse to stray in devious paths.

The very thought of her was cheering, as I mounted the long stairway to the six-o'clock dinner, after a day of arduous activity and scanty lunch, or none. And I often soliloquized, possibly unconsciously aloud, "Now Corinne will rest me!" And this was literally true. The faithful, generous girl, surely ignorant of selfishness, was almost ever there, ready to lend me the brightest hour I ever passed in Paris.

I am ashamed to confess that those sweet hours were not equally unselfish on my part; for they were the very quintessence of sordid selfishness, sought and enjoyed as mere recreative pastime, without the slightest recompensing compunction; which it were impossible even to think of rendering in filthy lucre, and which I was incapable of returning in reciprocative entertainment.

My landlady had been of the exclusive aristocracy; but her husband had perished under Cavaignac in the battles of the barricades of the Faubourg St. Antoine, some two years before I arrived in Paris; and the good lady quit the old home and took refuge in the house where I roomed, which was hers, and rented the apartments, and gave meals to a few, to support herself. Her kinsman was an exile in New Orleans in those stormy times.

The Influence of Corinne

The influence of Corinne has been a powerful leverage in my wonderful career; for she was really the guardian-angel of my Parisian life. Had she been frivolously indiscreet and voluptuously reckless, this page might never have been written. She could not have turned me from my course; but she might have eclipsed the brilliancy of my course of studies, with the opportunities she had to have lured me, if not to utter destruction, certainly to sheer neglect of my duty and the squandering of money to a degree that might have left me in the lurch, even with my father when he came to know that I had stumbled from the path of rectitude. But the influence of Corinne was diametrically the opposite. She demonstrated to me the trans-

cendentalism of innocent purity, without preaching any sermons or uttering a single word in any religious strain. She talked of Voltaire, Rousseau, Shakespeare, Byron, Moore, and many others, as grand literary artists or painters, as the fancy struck her, but never a word about their faiths or negations.

She must have been a person of importance somewhere or someway, as she was elegantly dressed and wore superb jewelry, and was mistress of an education rarely approached by one woman in a thousand. I then fancied and still believe she was hiding from political pursuers; and that she was brilliantly social with me as a temporary surcease from some great sorrow she fain would hide from vulgar eyes. Were a true story of her life known, I verily believe it would be a Never-Told-Mystery of Paris.

Certainly, she made a saint of me as to female debauchery in Paris. Had I been the companion of a lewd woman, I should have faced as readily the accusing angel as those soul-searching eyes of Corinne, possibly gifted with a glint of second sight that would have unmasked my shameful lapse. When I bade her good night at the table, I went to my room to read restful, recreative literature from a library, declining invitations to roam abroad at night, having ample time to satiate my curiosity in Paris on Sunday, outside of where my rounds of the week led me.

Corinne was in the house when Louis Napoleon was the regal president and when the second empire was established; and she seemed to me pale and anxious on the last occasion, with which I did not then associate her seeming cheerlessness, no political word ever being uttered in the house. Some time after the empire was established I noted the headlines in a newspaper saying something about an amnesty. And when, two or three days later, I went to dinner, Corinne did not appear; and I never saw her again. I was as sincerely distressed at her disappearance as I might have been at tidings of the death of my father; yet, I said nothing, understanding that the subject was not discussable in that house.

My friendship with Corinne taught me a priceless lesson: that chastity does not prejudice either the health or reproductive organism of a busy man, which has served me admirable turns many a time since. After I recognized that this woman exercised a restraining influence over my impure passions, I began unconsciously, without an effort, to abandon both such meditation and

desire, never coming in contact with any luring temptation, certain not to cross my path in my rounds of activity by day, and far more remote in the house at night.

Two Women—A Contrast

I sit here spellbound, unable to write a line for an hour at a stretch, contrasting the antithesis between the seamstress in my father's house, esteemed worthy to be the companion of my mother and sisters, and Corinne, a fair and amiable stranger, in a public lodging- and boarding-house, worthy to sit incarnate among the seraphs around the throne of God.

Corinne had not been absent more than two or three months when I saw no more of my landlady, finding the housekeeper in charge when I went to pay my monthly instalment; and she never came again in my time; yet, the service of the house remained unchanged.

The longer and more profoundly I have studied sexual necessity, the more positive became my conviction that customary cultivation of the grand passion calls aloud for indulgence more urgently than any modicum of true requirement of distressed nature in man. That I did pass four years in the Babylon of Europe, where vice of all grades is a commercial commodity, with ever sufficient surplus pocket-money to have purchased any ordinate supply, is proof positive of the possibility of abstinence. That I lapsed regretfully at a later period, that will be told in its place, I do not now deny; though then due to comparative leisure and dissolute companionship, neither of which I ever had in Paris.

I have dwelt so tenaciously on an incident so trivial ordinarily as my meeting with Corinne, because her influence became so forcefully intertwined in the very fiber of my being that much of what I am tonight has been the propitious offspring of that subtle inspiration. And I want it recorded here to support other eventualities that should body forth to view long and weary years in advance of this rambling Parisian portraiture.

My Friends—My Helpers

To Blanche père, Henri Roger, Hipolyte Hérard, and Corinne, I owed the rarest and richest treasure of medical attainment any American ever brought home from Paris since the period of 1860. With the adored and ever adorable Corinne, I must now part for all eternity. But those noble, deathless men, enshrined and embalmed in my ever grateful

memory, who never abandoned me, not even in the hour of my darkest desolation, of them I shall never be silent till the final page of this memoir is moistened by my farewell tears!

When my father learned of the special pains those illustrious men had taken to facilitate my education, he sent them each a handsome gratification, such as they richly deserved, though I do not believe that it tended to stimulate their activity in my interest; for they were doing all possible before that manifestation of gratitude was proffered.

The Curriculum

I believe it would be a worthless waste of energy and space to outline an elaborate detail of my practical studies, as almost any reader will be familiar with lectures, clinics, and hospital routine, all of which have been improved as radically as the drug feature of medication itself. I had my book lessons to con over in the early morning, and heard questions appertaining thereto some time during the day; as well as saw practical hospital demonstrations, mostly in the Charité hospital, where there was ever a surging concourse of heterogeneous diseases daily treated from the dispensary, that were not admitted to the wards, which always were full. The rush of that early outside attention being over, the regular rounds were taken, a clerk or so being left in the dispensary to look after the late stragglers. There, in the great cheerless wards, daily opportunities were met to see the slow improvement or immediate decline of desperate patients, whose care and nourishment were less elegant than were to be seen in the best pay-wards of the Hotel-Dieu, yet, sufficient as objects of instruction to a young aspirant in quest of medical knowledge.

I was not initiated in the mystery of surgery for more than a year; and had the scholastic rudiments of anatomy well mastered ere I was brought in contact with practical lessons. I had my regular turns in dissecting-rooms, as well as being present at actual operations; and there were ever operations and operations of the surgery of that age in Paris, then equal if not superior to any other in the world. And I am now satisfied that that is the true process of learning surgery; for, seeing the arteries taken up a few times, in major surgery, creates a more memorable lesson than reading of it a hundred times, bloody work in quick anatomy being the most intensely impressive lesson ever taught to medical students. It prepared me effi-

ciently for the horrible work I later did in the civil war, and have been doing during these dark and murderous years down here in Mexico.

After the lapse of some two years, I was to the front in the dispensary practice of the Charité hospital, with the legitimate practitioner, I diagnosing and prescribing, the regular correcting or approving my conclusions. Thus I gradually left less and less errors to be supervised, and was finally, some time after three years had elapsed, entrusted with work not critically serious, for which I possibly was better qualified than most students are now when they leave college, with theory oozing from the tips of their fingers, yet, entirely ignorant of its practical application. I do not say this without substantiating proof; for I have had a number of newly fledged graduates, directly from college, with me in critical tropical practice—an experience I have sternly declined during the past fifteen years, and shall never repeat again. It does not seem strange to me that a young physician just from college, who is really nothing more than a practicing student, has an uphill job to establish a bare living-practice, which he has to learn before he is worthy to receive pay for his services.

The horrors of the venereal wards of the pest hospitals were too nauseating to portray within a dozen hours of meal-time; and I am just now from the supper-table. The depth of degradation to which depraved humanity can descend is too incredible for belief, without the tangible vision. I have never met between two covers of any book accounts to approach scenes I witnessed with my open eyes. The pitiful victims of masturbation presented an appalling scene; while the varied stages of syphilitic mutilation were better imagined than told. Truly the proverb "The way of the transgressor is hard" was there doubly told over anew and confirmed.

There was a deep, ominous, yet, publicly suppressed clinical discontent about drug

deficiency, really amounting almost to the nihilism of this age, prevailing in the United States, the loftiest bright minds of that age having little stable faith in the efficacy of the medication in vogue, those who would survive without medical intervention recovering, while all others lapsed into dissolution, despite all the medical fraternity could do. But the failures were attributed to inert or worthless armamentariums, rather than to the incapacity of medical practitioners.

This unrest and incrimination were the brewings of the radical revolution that super-vened a few years later, the veritable embryo being in active gestation in the University of Ghent ere I left Paris, although some eighteen years were required for the intrepid medical giant to launch his startling propaganda among the stale herb-shops of Paris, to create a commotion among the dry bones of chemistry. The surprise was welcomed by the medical fraternity of Paris, deeming anything better than what existed.

As all things else in this world, my four years in Paris came to an end, and I was adjudged competent to be the physician of a big slave plantation, surrounded by miasmatic swamps, a position in a high degree responsible, where my father and his associate kinsmen designed to sacrifice my ambition, or maybe they presumed I should have no higher aspirations. For that reason, I was sent to Paris instead of to West Point. And the worst of it all, the task was mine to establish the plantation, which was not to contain so much as a negro-cabin ere my return; yet, a huge interest was to be mine, a legacy or partnership I certainly never relished.

I left Paris to pass some months at New Orleans to study yellow-fever, pernicious fever, and breakbone-fever, which were ever present in the Louisiana lowlands, at the season I was to arrive there, against whose infection my affectionate kinsmen probably presumed the schools of Paris had rendered me immune.

(To be continued)



Cavia Cobaya: Medical Martyr

The Guinea-Pig, and What We Owe Him

By B. G. R. WILLIAMS, M. D., Paris, Illinois

[Concluded from page 54 January issue.]

THE uses to which the cavy may be put in research-work are many, but would scarcely interest the average reader. I rather shall consider its importance in routine diagnostic studies.

Recourse is had to the cavy in the matter of fresh complement for the complement-fixation serosyphilitic tests. An assistant picks up the animal by its hind legs and holds it head downward. With the free hand he seizes the front feet and head and holds them in such a manner that they do not interfere with the operation. The operator plucks some hair from the neck and pushes a sharp, narrow scalpel through the neck anterior to the trachea. The cutting edge is turned out in such a manner as not to cut the trachea. Then the large vessels of the neck are incised. The blood is collected into tubes through a sterile glass funnel. A large amount of the blood may be secured if the chest is squeezed. Tubes should not be centrifugalized, but placed slanted on ice. Some hemolysis is likely to take place when centrifugalized, although the latter process saves time. Of course, this procedure means a dead cavy, but enough complement may be secured for several tests. Even when kept on ice, complement loses much of its activity after twenty-four hours, and other guinea-pigs must be bled if additional tests are to be set up.

In suspected tuberculosis of the kidney, it often is advantageous, when symptoms are vague or when the specific bacilli can not be found in smears, to inoculate the cavy. This procedure is attended with less difficulty than is generally supposed. Catheterization, usually advised, is more likely to contaminate the urine than to secure it sterile for this purpose. I usually follow the technic advised by Stitt. The glans penis and meatus should be thoroughly washed with soap and water, after which 40 percent alcohol should be used. The greater part of the urine first passed is rejected and only the last portion caught in a sterile centrifuge tube. The last few drops are avoided, because the muscles surrounding the urethra, when contracting to express the last few drops, are likely to loosen the contents of

the glands. The specimen is centrifugalized and the sediment injected into the animal. Hold it as advised above; animal-holders are not needed.

After plucking out the hair, it is best to clean the skin with soap and water and then with 50-percent alcohol, inasmuch as strict asepsis is imperative. The intraperitoneal injection is the one usually described. The needle should be introduced at the edge of the umbilicus. After three weeks, the guinea-pig is killed and autopsied, the peritoneum and mesentery being carefully examined for tubercles. These may be sectioned, in case of question. Pyococcus infection may kill the animal within a few days after inoculation. In other instances, autopsy may demonstrate miliary tuberculosis of an acute type.

Recently Bloch has devised a special technic for the subcutaneous inoculation. He injects a cubic centimeter of urine into the thigh of the cavy, massages toward the inguinal glands and pinches these somewhat to injure them and lower their resistance. These glands may be removed after ten or twelve days and examined for tuberculosis by means of smears or sections, or both. This gives us a very rapid method of precise diagnosis in regard to tuberculosis of the kidney. It has been proposed to try tuberculin reactions on the inoculated cavy. These, however, are unsatisfactory as well as unnecessary.

The same inoculation methods can be used in the case of suspected tuberculous exudates, more rarely of the sputum, inasmuch as contamination is almost inevitable and the cavy is very susceptible to mouth bacteria.

Of course, the cavy may be used in the isolation and identification of other pathogenic bacteria. As a matter of fact, the animal is rarely called upon to do so in routine diagnostic work. In college laboratories, it is used in the diagnosis of typhoid fever, pneumonia, hog-cholera, and so on. The male is used in the Straus reaction for glanders.

Several points may be kept in mind when working with cavies in laboratories or demonstrating them before medical societies. If once loosed on the floor, there are not likely

to be enough persons present to catch one of them. Finally, the cavy will not bite. I will remember the first one I received by express after coming to Paris. The expressman held the box at arms-length, his hands

well protected by gloves. When he set it down, he sighed deeply and long. Then he rubbed some sweat from his forehead and produced his bill, with the significant remark: "Well, doc, here's your rat!"

The Physiologic Action of Emetine Hydrochloride

By CARL NIELSEN, Ph. C., Chicago, Illinois

Pharmacologist, The Abbott Laboratories

IT seems to be a clinical fact that emetine stops hemorrhage, but very few investigators have attempted to explain the hemostatic properties of this alkaloid. In fact, Maurel is the only one who has given a definite explanation of the mode of action of emetine when administered in therapeutic and toxic doses (*Bull. d'Acad. de Med. de Paris*, Mar., 1914; c.f. this journal, February, p. 136), and his experiments led him to conclude that the effect of therapeutic doses of emetine hydrochloride is owing mainly to its action upon the smooth muscular fibers, which it contracts. Maurel also concludes that its hemostatic properties are the consequence of this contraction of the smooth fibers in the blood vessels; or, in other words, that emetine is a vasoconstrictor.

Maurel's experiments, made upon eels, frogs, pigeons, and rabbits, further have shown him that emetine, in gradually increasing doses, affects the sensory nerves, motor nerves, striated fibers, and cardiac fibers; and that these actions fully explain the long-known properties of ipecac as a decongestant, antiphlogistic, and defervescent besides, perhaps, as an abortive.

Furthermore, he comes to the just conclusion that the use of emetine is to be preferred to that of ipecac in all cases where the latter has been employed—with one exception; namely, as an emetic. It is a well known fact that emetine is much less emetic than is ipecac and that the emesis induced by the latter is mainly brought on by cephaeline, the second alkaloid of the root.

The following experiments were undertaken chiefly in the attempt to learn how emetine acted as an antihemorrhagic. At the same time, naturally, its action as an emetic was observed, and an endeavor made to discover whether this latter action was the result of local irritation of the gastric musoca, as assumed by some investigators, or a direct effect

upon the central nervous system, as maintained by others.

The emetine hydrochloride employed for these experiments contained only a trace of cephaeline, as proven by accurate tests.

Influence of Emetine Upon Arterial Pressure

Factors of the experiments detailed herein:

EXPERIMENTS SERIES I

Test employed: blood pressure. Animals used: dogs. Solution for testing: emetine hydrochloride in physiologic salt solution 1 : 100.

Dog. No. 113; male; weight, 24 pounds.

Anesthetic: 35 Cc. of trichlorbutylalcohol of 10-percent strength, injected intraperitoneally.

The carotid artery was exposed and connected to the mercury-manometer, and the lever of this instrument adjusted to the kymograph, in the usual way. The injections were made into the saphenous vein.

Amount of emetine hydrochloride injected: Gm. 0.01 (therapeutic dose).

Result: Blood pressure decreased very slightly at first, then increased to a trifle above normal. Five minutes after injection, blood pressure was again normal, while the rate of the heart beats gradually decreased during the following two hours. (See tracing No. 1.)

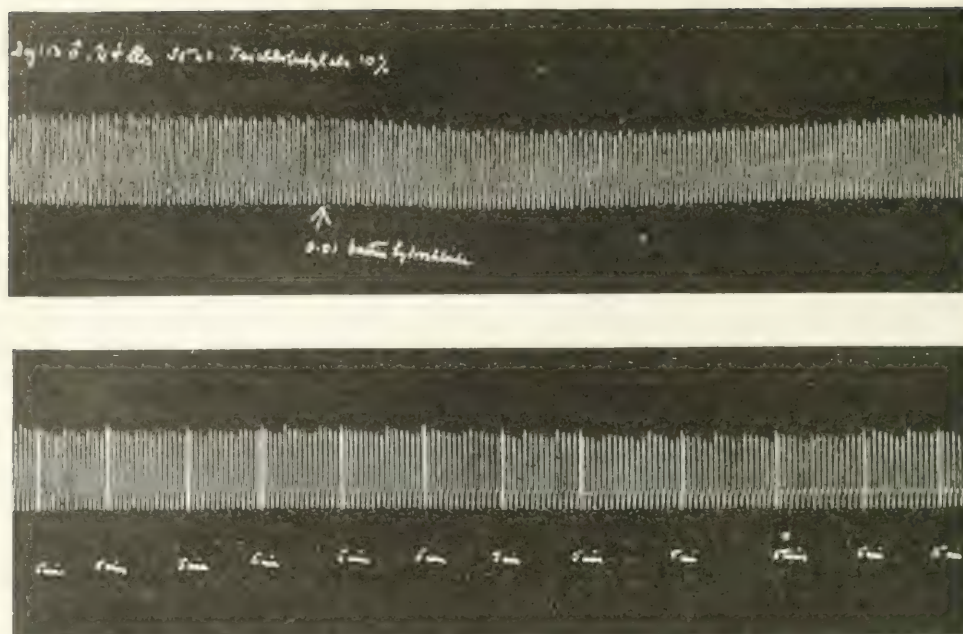
Dog No. 115; male; 17½ pounds.

Anesthetic: 25 Cc. of trichlorbutylalcohol, 10-percent.

The dog was prepared in the same way as the preceding one.

Amount of emetine hydrochloride injected: 6 successive doses of Gm. 0.02 (toxic dose).

Result: The first injection of 0.02 Gram of emetine hydrochloride produced an effect similar to the injection given dog No. 113. There was first a very slight fall and then a very slight rise in the blood pressure, and a gradual decrease in the rate of the heart beats. However, as a result of the larger dose,



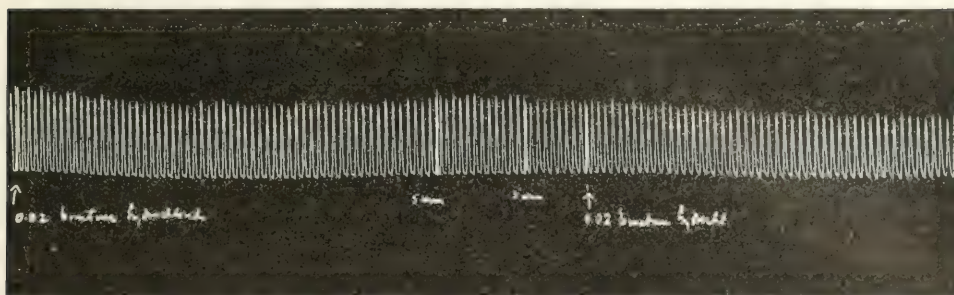


Fig. 2. This small section from the tracing shows the increasing weakness of the heart under toxic doses of emetine. Death of dog followed after six injections of 0.02 Gm. each.

It is generally accepted that the proportion of blood-platelets determines the coagulability of the blood, and the suggestion was to the effect that emetine, by increasing the number of blood-platelets, and consequently the coagulability of the blood, might thus act as a hemostatic.

The following experiments were made to ascertain whether this was the case.

EXPERIMENTS SERIES II.

Animals used: rabbits. Solution for testing: emetine hydrochloride, in physiologic salt solution, 1:100.

Method of procedure: The number of erythrocytes, leukocytes, and blood-platelets was counted before and after the injection of emetine hydrochloride. The blood was taken from the ear. The injections were made intravenously into the ear. In counting the leukocytes and erythrocytes, the usual technic was followed and the Thoma-Zeiss hemocytometer used. At least three counts were made for each specimen of blood taken. The number of blood-platelets was determined as follows:

A small area of the rabbit's ear was shaven and cleansed with alcohol. After complete evaporation of the alcohol, the area from which the blood was to be taken was rubbed with sterile liquid paraffin; then one drop of a

10-percent solution of sodium-metaphosphate was applied to the point at which the needle was to be introduced, and a needle was pushed through this solution and the skin into the vein. The out-flowing blood mixed immediately with the sodium metaphosphate solution, and small portions of this fluid were collected on different slides and smears made in the usual way.

After air-drying these smears, they were stained with Jenner's or Wright's solution. The blood-platelets appeared as round or oval, light-bluish bodies, about one-third the size of the red blood-corpuscles. The number of platelets was determined by its proportion to the number of erythrocytes, previously counted. A large number of counts had to be made of each specimen, to ascertain the approximate number of the platelets. It is, indeed, a task involving great care, exactitude, and patience to obtain comparative results of value.

Rabbit No. 1; weight, 1242 Grams.

Leukocytes before injection, 11000 per cmm.

Erythrocytes before injection, 6,000,000 per cmm.

Blood platelets before injection, 265,000 per cmm.

Dec. 1, 4:30 p. m., injected 0.0045 Gram of emetine hydrochloride.

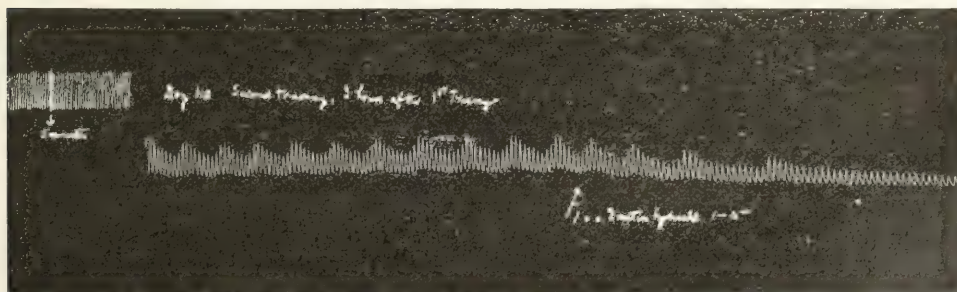


Fig. 3. Dog No. 110 was also given a toxic dose of emetine (0.066 Gm.). This section of the tracing, taken three hours later shows the terminal cardiac paralysis following.

Dec. 2, 9:15 a. m., blood-count made. No change. Injected 0.0045 Gram of emetine hydrochloride. Blood-count made at 1:45 p. m. No appreciable change. Injected 0.0045 Gram of emetine hydrochloride.

Dec. 3, in the forenoon, blood-counts again were made. No change. Injected another 0.0045 Gram of emetine hydrochloride. Blood-counts made in the afternoon showed no change.

Dec. 5, injected 0.006 Gram of emetine hydrochloride (equivalent to 0.0027 Gram per kilogram body-weight). The animal showed no visible symptoms.

Dec. 6, in the morning, blood-counts were made again, but there was practically no change in the numbers of the different constituents.

Rabbit No. 2, weighting 1815 Grams, and rabbit No. 3, weighing 2500 Grams, were treated in the same way.

There was no change in the physical composition of the blood, as a result of the emetine injections.

Influence of Emetine Upon the Coagulability

In order to ascertain, further, whether or not emetine increases the coagulability of the blood, the following experiments were conducted:

EXPERIMENTS SERIES III

Animals used: dogs. Solution for testing: emetine hydrochloride in physiologic salt solution, 1 : 100.

Method of procedure: A dog, weighing 20 pounds, was prepared as for blood-pressure test mentioned above.

Before the injections of emetine were given, different specimens of blood were taken in the following way:

Sterilized capillary glass tubes (approximately 3 inches long) were filled with the fresh blood, by introducing them into the carotid artery. The time was recorded. The room in which these tests were conducted was kept at a constant temperature of 20° C. Every ten seconds about $\frac{1}{4}$ of an inch of each of the filled tubes was broken off and as soon as the first blood fibre appeared at the breaking-point, the time was recorded. The interval between the taking of the blood and the appearance of the first fiber was considered the time of coagulation.

After having established an average period, as a result of several blood samples tested, 0.01 Gram of emetine hydrochloride was injected intravenously into the dog.

Five, ten, twenty and thirty minutes, respectively, after this injection, specimens of

blood were taken again, in the same way, and the time of coagulation noted.

This experiment was repeated with two other dogs, but in neither case could any appreciable change in coagulability of the blood be determined.

Thus, it is evident that emetine, in therapeutic doses, influences neither the number of blood-corpuscles or blood-platelets nor the coagulability of the blood.

As these experiments failed to explain the antihemorrhagic action of emetine—so thoroughly proven clinically—it occurred to me that possibly it may act mainly upon the capillary circulatory system, producing sufficient vasoconstriction in those vessels to stop hemorrhages.

EXPERIMENTS SERIES IV

To determine this question, the following experiments were undertaken.*

A series of six frogs were anesthetized with ether and the intradigital membrane of the left hind leg was stretched out for observation under the microscope; the membrane being kept moist with Ringer's solution during the entire experiment. The frog was left five to ten minutes after the ether had taken effect, in order to allow the circulation to become regular and normal.

The rapidity of the circulation in a series of capillary blood-vessels in a chosen field was now closely and carefully observed; also their lumen. Then $\frac{1}{2}$ Cc. of a 1 : 1000 solution of emetine hydrochloride in physiologic salt solution was injected into the abdominal lymph-sac.

Influence of Emetine Upon the Capillaries

In all the experiments, the same results were obtained. Five minutes after the injection had been made, the circulation in the smaller capillaries became slower; in another ten minutes, the decrease in the rapidity of the flow of blood in the smaller capillaries was considerable, while that in the larger capillaries was noticeable; and during the next thirty minutes the rapidity decreased gradually, until it stopped completely in most of the smaller vessels, and became so slow in the larger ones that each blood-corpuscle could be distinctly followed on its course. It also

*After these experiments had been performed, I found, in reading up the literature on emetine, that Maurel, in his investigations, had already in 1901 and 1902 used the same method of procedure as I had adopted, in his attempt to explain the decongestant action of emetine; and that M. Chauffard, in his criticism of Maurel's paper on the therapeutic and toxic effects of emetine (Soc. Biol., Mar. 24, 1914) states that, as a result of his clinical experience, he considers emetine to act as a vasoconstrictor, limited, however, to the capillary system:

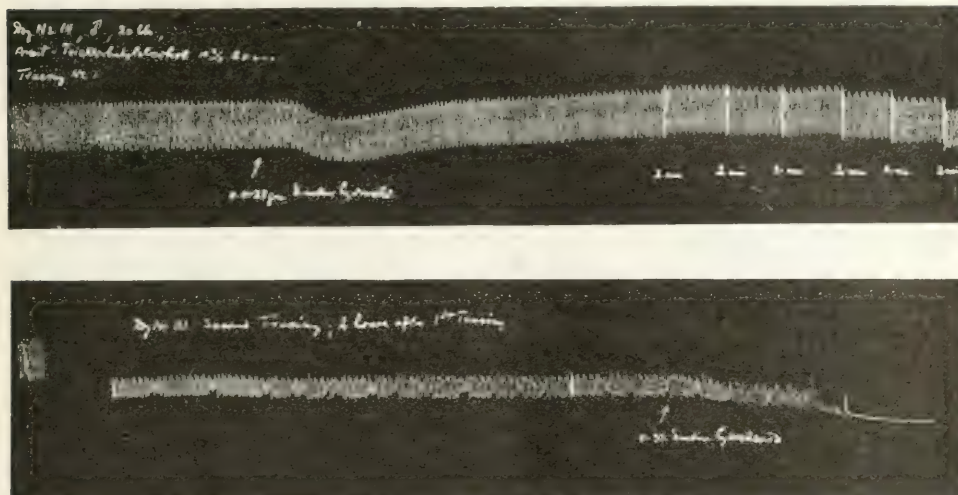


Fig. 4. Dog No. 111. A toxic dose (0.033 Gm.) of emetine hydrochloride was administered. Paralysis of heart, with death resulting.

could plainly be seen, without the aid of a micromillimeter-scale, that the capillary vessels had been contracted. In a few instances, the dose was repeated, and this, of course, produced a more rapid effect. The effect lasted more than an hour, after which the rapidity of the circulation gradually rose to normal again. All the frogs recovered.

This experiment is so beautiful that it cannot be too strongly recommended to the students of pharmacodynamics as a demonstration of the effects of emetine. It leaves no doubt as to its action as a vasoconstrictor; that, however, this effect is limited to the capillary system, is obvious from the results of the blood-pressure tests.

Therapeutic doses of emetine decreased the rate of the heart-beat, but failed to affect noticeably the blood pressure; while toxic doses dilated the vessels, thereby making the blood pressure fall, at the same time decreasing considerably the rate of the heart beats by paralyzing the heart-muscle.

After arriving at the foregoing results, I thought that possibly emetine might cause a

reaction in the cock's comb. Consequently, three white leghorn roosters, weighing between 1500 and 1600 Grams, were given injections of, respectively, 0.001, 0.002, and 0.003 Grams of emetine hydrochloride into the breast-muscle. However, I could not observe that any visible effects were produced, and the method was therefore abandoned.

EXPERIMENTS SERIES V

I now proceeded to determine the M. L. D. (minimum lethal dose) of emetine hydrochloride when injected intravenously into dogs and rabbits, watching closely the symptoms produced by the different doses.

In the dogs, the injections were made into the jugular vein; in the rabbits, into a vein in the ear. All injections were given by means of a Hitchen's syringe when the animal's stomach was empty.

The M. L. D. of emetine hydrochloride injected intravenously, therefore, is to be estimated at 0.005 Gram per kilogram body-weight for dogs.

DETERMINATION OF THE M. L. D.

DOG	SEX	WEIGHT	TOTAL DOSE	DOSE PER KILOGRAM	RESULT
No. 123	Male	Gm. 13,400	Gm. 0.03	Gm. 0.0022	Vomited once—35 minutes after injection. Increased salivation; nausea; vomiting 40 minutes after the injection; muscular weakness; decrease of temperature; slowing of pulse; dog recovered.
No. 131	Male	Gm. 12,000	Gm. 0.03	Gm. 0.0025	
No. 132	Male	Gm. 12,000	Gm. 0.036	Gm. 0.003	Same; vomiting occurred earlier.
No. 133	Male	Gm. 14,000	Gm. 0.056	Gm. 0.004	Same as preceding.
No. 134	Male	Gm. 12,000	Gm. 0.06	Gm. 0.005	Vomiting occurred 10 minutes after the injection and was very violent and frequent for two hours; pronounced muscular weakness and slowing of pulse. Died next day.

Hence, the M. L. D. of emetine hydrochloride per kilogram body-weight of rabbit, when injected intravenously, must be considered as approximately 0.0038 Gram.*

Dog No. 145; female; weight 11,300 Grams.
Dose: 0.0025 Gram emetine hydrochloride per kilogram body-weight, in a 1 : 100 solution by mouth.

RABBIT	WEIGHT	TOTAL DOSE	DOSE PER KILOGRAM	RESULT
No. 1	Gm. 1995	Gm. 0.00498	Gm. 0.0025	No visible symptoms.
No. 2	Gm. 1995	Gm. 0.00558	Gm. 0.0028	No visible symptoms.
No. 3	Gm. 1975	Gm. 0.00592	Gm. 0.003	No visible symptoms.
No. 4	Gm. 1300	Gm. 0.0039	Gm. 0.003	No visible symptoms.
No. 5	Gm. 1545	Gm. 0.0054	Gm. 0.0035	No visible symptoms.
No. 6	Gm. 2000	Gm. 0.008	Gm. 0.004	Died after three minutes, under a few convulsions, from a central paralysis. Post-mortem examination showed no abnormality of the organs. The heart stopped in diastole.

To determine whether a toxic dose of emetine given to rabbits by the mouth would produce vomiting or other visible symptoms, rabbits No. 1 and No. 2, after a complete recovery from the intravenous injections, were in that way given, respectively, 0.003 and 0.004 Grams per kilogram body-weight, of emetine hydrochloride, in a 1 : 100 solution. No symptoms occurred. It is interesting to note that even high toxic doses injected intravenously did not produce appreciable symptoms in rabbits, either; not even the appetite was affected.

Maurel (Soc. Biol., 1901, 1902) has determined the M. L. D. of emetine hydrochloride when given by mouth and when injected subcutaneously, for the eel, frog, pigeon and rabbit. He considers the M. L. D., subcutaneously and by mouth, for a rabbit to be 0.15 per kilogram. It is intended to repeat these experiments.

Experiments on the Emetic Action of Emetine

Finally, a series of dogs were treated with therapeutic doses of emetine hydrochloride, injected subcutaneously, ranging from 0.0005 to 0.0015 Grams of emetine hydrochloride per kilogram body-weight. In no case were there any appreciable symptoms; vomiting did not occur. These doses as well as all the following were given when the animal's stomach was empty.

Higher doses (from 0.0025 Gram up) produced vomiting in dogs when they were administered either subcutaneously or by mouth.

EXPERIMENTS SERIES VI

Dog No. 144; male; weight, 15,000 Grams.

Dose: 0.0025 Gram emetine hydrochloride per kilogram body-weight, subcutaneously.

Result: Vomited fifty minutes after injection, and again one hour after injection. Recovered.

Result: Vomited fifty minutes after the dose, and again two hours later. Recovered.

Dog No. 146; male; weight, 15,400 Grams.

Dose: 0.005 Gram emetine hydrochloride per kilogram body-weight subcutaneously; given at 10:35 a. m.

Result: Vomited at 11:15, 11:30, 11:45 a. m., and at 12:15 p. m.; the dog was left for two and a half hours, then fed. Vomited the entire meal ten minutes after feeding.

Two days later, this dog was given 0.002 Grams emetine hydrochloride, subcutaneously, per kilogram body-weight. Vomiting occurred twice after this dose, also increased salivation, slowing of pulse, decrease of temperature, and muscular weakness. The following day, the dog received a subcutaneous injection of 0.001 Gram per kilogram body-weight, in the shoulder. Vomiting occurred instantly, and thereafter was frequent during the next two days. The dog refused to eat and was unable to stand up. On the eighth day (after the first dose), the dog was dying.

This dog then was quickly anesthetized with ether and bled to death through the carotid artery. The blood was collected aseptically in a sterile flask. It coagulated rapidly and the serum was gelatinous. Postmortem examination was made by Dr. C. A. Zell, of The Abbott Laboratories, and revealed the following conditions:

Pronounced gastroenteritis. Stomach filled with blood from large ulcers on the mucous membrane. Bladder slightly irritated. Hemorrhagic nephritis (apparently chronic). Echinosis of heart-muscle and valves. Liver congested, gall-bladder distended and filled with bile. Heart arrested in diastole.

Dog No. 145, which received 0.0025 Grams emetine hydrochloride per kilogram body-weight, by mouth, was left for ten days, after which time the animal seemed to have recovered perfectly.

Then a subcutaneous injection of 0.0025 Gram per kilogram body-weight was given, at

*Henry J. Nichols and Edward B. Vedder give the M. L. D. of emetine hydrochloride intravenously administered, for rabbits, as 0.0025 Gram per kilogram body-weight. But this, according to our results, is too low.

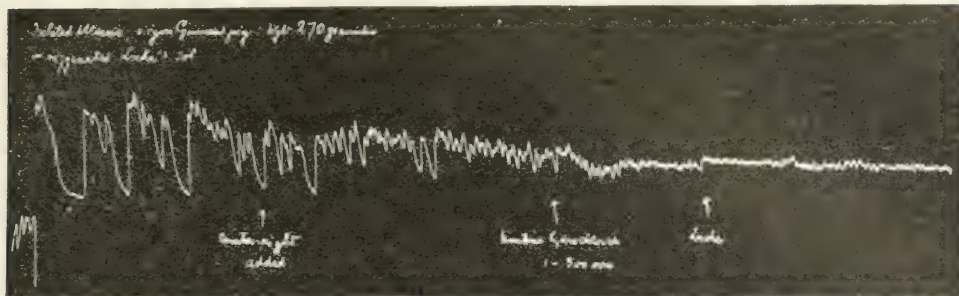


Fig. 5. According to this experiment emetine does not increase or decrease uterine contraction, but weakness of the uterus, when present, may be intensified by its use.

1:55 p. m. Result: Vomited at 3:00, 3:10, 3:20, and 3:35 p. m. Recovered.

The vomited matter, in this case as well as in all the others, was first thin, grayish, and of acid reaction; later, very green from bile and of alkaline reaction. It was collected, acidified with sulphuric acid, and shaken with ether. The ether was drawn off. Then the watery solution was filtered, rendered alkaline with sodium hydrate, and again shaken with ether. The ether extraction was separated, filtered and evaporated to dryness. The dry residue was taken up with dilute sulphuric acid, shaken out with ether and the latter drawn off. The aqueous portion was filtered, made alkaline with sodium hydrate, then shaken with ether. The ethereal extraction was filtered and evaporated to dryness. This residue now was tested for emetine with a solution of molybdic acid in concentrated sulphuric acid.

If emetine were present a yellowish-green color should appear. The reaction was doubtful. (Control tests were made with the residue from a very dilute solution of emetine, treated in the same manner.)

Dog No. 144, who in the meantime (twelve days) had recovered from the first dose, was given 0.0025 Gram emetine hydrochloride per kilogram body-weight, subcutaneously, at 2:45 p. m. The dog urinated one and one-half hours after the injection. Vomited at 4:40 (two hours after the injection), and again at 5:30 p. m. Recovered.

The urine and vomited matter were collected separately, and tested for emetine according to the foregoing method, with the one modification, that the final residue was redissolved in a few drops of dilute hydrochloric acid and again evaporated to dryness. The emetine hydrochloride thus formed, if present, would give a brighter green color with the reagent. The residue from the vomited matter as well as the one from the urine gave a negative reaction.

Dog No. 147; male; weight, 17,300 Grams.

Dose: 0.0025 Grams emetine hydrochloride per kilogram body-weight, in substance, in a gelatine capsule, at 2:50 p. m.

Result: Vomiting occurred within fifteen minutes after the dose, at 3:05, again at 3:10, 3:17, 3:30, 3:45, 4:00, 4:10, 4:15. Bowels moved at 3:20, probably also as a result of the emetine.

The vomited matter was tested for emetine and gave a positive reaction.

Thus, then, we find that the vomiting produced in dogs by a toxic dose of emetine hydrochloride occurs rapidly when the drug is given as such by the mouth, much later when given by mouth in a dilute solution, and still later when administered subcutaneously. Fractional doses given subcutaneously produced a pronounced gastroenteritis.

This warrants one in saying, with reasonable certainty, that emetine produces vomiting only by irritating the nerve endings in the stomach wall, and not by direct stimulation of the nerve-center; for, in the latter case, the subcutaneous administration of the drug would produce vomiting much more rapidly than when taken internally.

Effect of Emetine on the Frog's Heart.

The action of emetine on the frog's heart also was studied. Frogs weighing from 40 to 50 Grams were anesthetized with ether and placed on their backs on a moist frog-board, in a moist chamber having a constant temperature of 37 1-2° C.

The frog was cut open and its heart laid free. Successive doses of 0.4 Cc. of a solution of 1:5000 of emetine hydrochloride were injected into the lymph-sac of the leg. As the reaction practically was the same in all the frogs tested, I shall cite only one instance:

Frog No. 1; female; 50 Grams:

Injected 0.04 Cc. of a solution of 1:5000:

Rate of heart beat before the injection.....	72 per minute
Twenty minutes after injection.....	70 per minute
Thirty minutes after injection.....	72 per minute

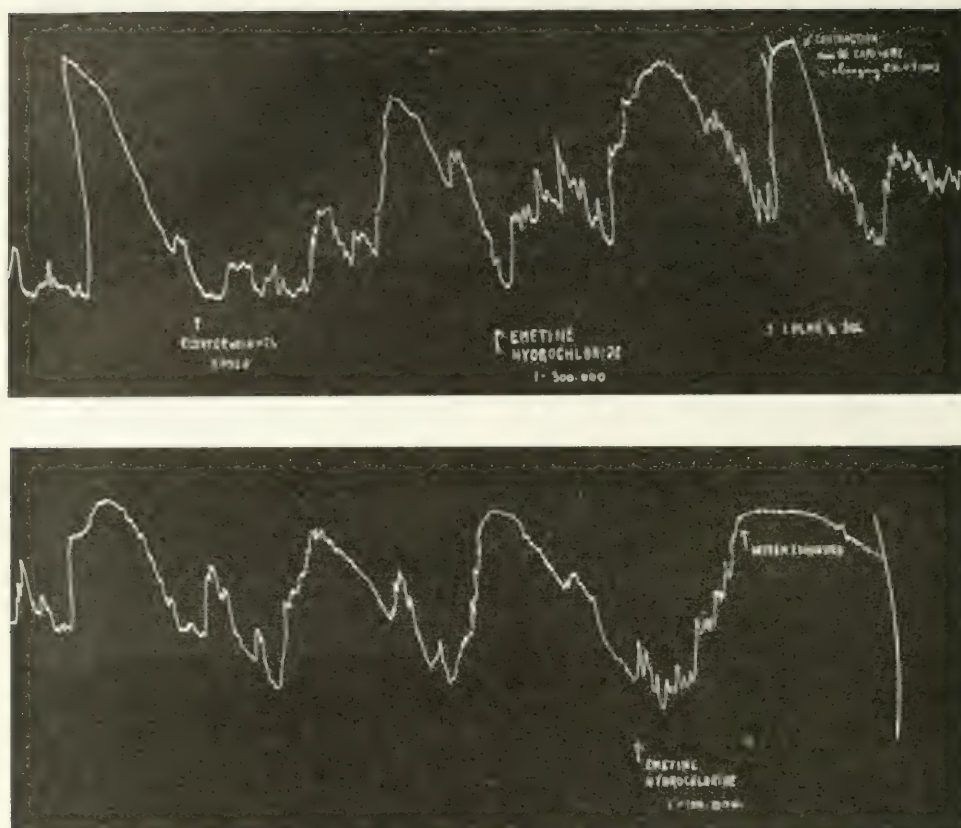


Fig. 6. Experiment with emetine, non-pregnant uterus of guinea-pig. Does not increase tonic contractions, but slightly increases number and violence of rhythmic contractions.

Injected 0.04 Cc. of a solution of 1 : 5000:

Five minutes after injection.....	.78 per minute
Fifteen minutes after injection.....	.78 per minute
Twenty-five minutes after injection.....	.80 per minute

Injected 0.04 Cc. more of the same solution:

Ten minutes after injection.....	.72 per minute
Twenty minutes after injection.....	.72 per minute
Thirty minutes after injection.....	.72 per minute

Injected 0.04 Cc. of the same solution:

Five minutes after injection.....	.72 per minute
Sixteen minutes after injection.....	.60 per minute

Injected 0.4 of same solution:

Thirty minutes after injection.....	.60 per minute
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Injected 0.4 of same solution:

Five minutes after injection.....	.40 per minute
Ten minutes after injection.....	.30 per minute
Fifteen minutes after injection.....	.5 per minute

The ventricle beat once for every 5 of the auricle beats; twenty minutes after the last injection the ventricle beat 6 per minute, once per 3 auricular. Sixty minutes after the last injection the ventricle beat once per 11 auricular. One and one-half hours after the last injection, the ventricle beat twice per minute; two hours after the last injection, the heart stopped in diastole.

During this experiment, an increasing relaxation of the muscles and a gradually decreasing respiration also was observed.

Influence Upon the Uterus

Maurel, in his paper mentioned, expresses the opinion that emetine should not be administered in pregnancy, as it might act as an abortive.

I have endeavored to determine whether emetine exerts any influence upon the uterus, using the isolated uteri from virgin and from pregnant guinea-pigs as test objects. The procedure was as follows:

Guinea-pigs weighing from 250 to 550 Grams were quickly killed by severing the carotid artery; then the spinal column was cut. One fallopian tube, with the attached ovary, was quickly excised and suspended, between two platinum hooks, in oxygenated Locke's solution, kept at a constant temperature of 39° C. The upper platinum hook was connected with a light lever, which was adjusted to the smoked kymograph-paper. The con-

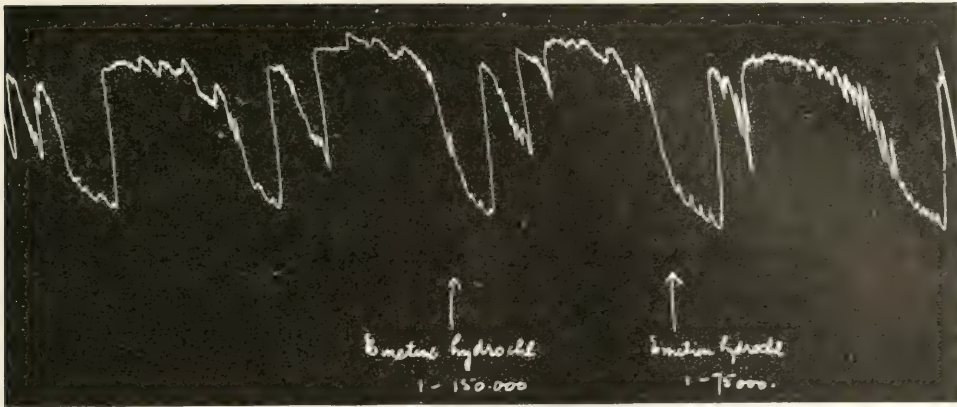


Fig. 7. Experiment on pregnant guinea-pig uterus. Same results as shown in Fig. 6.

tractions of the uterus were diminished by adding counter-weights, until it made regular, rhythmic contractions.

Now different doses of emetine hydrochloride were added to the Locke's solution and the action observed.

The first tests showed that emetine did not cause the isolated uterus either to contract or to relax to any appreciable extent, but it appeared that, when counterweights were added until the uterus was making only small rhythmic contractions, the addition of emetine would quickly bring about weakening or exhaustion of the organ. (See tracing No. 5.) Consequently, in the latter experiments, only a moderate amount of counterweights was added, so that the uterus could contract more freely, and thus show more in detail the action of emetine, if any.

As a result of these tests on pregnant and nonpregnant cavy-uteri, it may be said that emetine apparently does not influence the tonic contractions, while it does seem to increase slightly the number and the volume of the rhythmic contractions. (See tracings Nos. 6 and 7.)

As an interesting feature, I may mention that the segment of the pregnant uterus used for tracing No. 7 still contracted in a lively manner after twenty-four hours, although it

had been left over night in Locke's solution containing 1-75000 Gram emetine hydrochloride, with the oxygen shut off, and the temperature decreased to 15° C.

Conclusions

1. The hemostatic action of emetine hydrochloride in therapeutic doses is a consequence of its vasoconstrictive properties, confined to the capillary circulatory system, in conjunction with a decrease of the rate of the heartbeat, produced at the same time.

2. Apparently it does not influence either the physical composition or the coagulability of the blood.

3. In toxic doses it causes increased salivation, nausea, vomiting, slowing of pulse, decrease of temperature, and muscular weakness.

4. In lethal doses it produces central paralysis and arrests the heart in diastole.

5. The vomiting produced by toxic doses is due to local irritation of the gastric mucous membrane.

6. The results obtained with pregnant and non-pregnant uteri from guinea pigs seem to indicate that the action of emetine hydrochloride on this organ is not of therapeutic importance.



Lady Nicotine—Beneficent or Notorious

By EDWIN F. BOWERS, M. D., New York City

AFTER all is said and done, its worst enemies cannot accuse the sleek brown weed of making men quarrelsome. Always—since the overgallant Raleigh brought it from America and presented some to Queen Elizabeth—tobacco has assisted the deliberations of the mighty, cemented friendships, spun its tenuous clouds of romance in the brain of the poet, and sung its silent song into the soul of the musician. It is associated always with peace. Moreover, it has brought more solace, more comfort, and given greater enjoyment than any other artificial stimulus. It has helped more men over hard places than has any other agency.

None deny that tobacco possesses many virtues—in fact, many insist that these predominate. We know that it is exceedingly efficacious in destroying microbes, for, experiments have shown that in five minutes tobacco-smoke will kill the germs in the saliva, practically sterilizing the mouth. We also know that, if tobacco is placed in water containing cholera microparasites, these will be destroyed in twenty-four hours. In fact, the insecticide properties of a decoction of tobacco are of definite commercial value in killing sheep-ticks and other vermin, spraying fruit-trees, annihilating plant-lice, and making life miserable generally for get-at-able bugs.

Chemically, we know that tobacco contains albumen, gum, resin, malic and citric acids, and a large amount of inorganic salts—including potassa, magnesia, and silica—and last, but not least, nicotine.

Doctor Fullerton, of Cleveland, advocates the use of tobacco, chewed or smoked, as a germ killer—or, if not a killer, at least a crippler or paralyzer. He substantiates what we have said regarding its antiseptic qualities, based upon certain experiments with “sterilized tobacco-juice.” This he applied to pure cultures of the diphtheria, typhoid, and various other varieties of germs having predatory activities, and found that from 15 to 98 percent of germs were killed by the tobacco-juice in one hour, while an average of 84 percent were exterminated in twenty-four hours. The smoke from 45 grains of tobacco of only moderate rankness, burnt in a pipe, killed over half of these same varieties of germs.

Some years ago, General T. L. Clingman, of North Carolina, a senator and a tobacco-planter, advocated the use of tobacco as a specific for almost all the ills to which flesh is heir. The leaves, moistened and bound over the parts, were “cal’lated” to relieve wounds, bruises, sprains, inflammation of the eye (the General claimed to have cured his own case “when the doctor had given it up”), diphtheria, “quinsy-sore-throat,” erysipelas, croup, sciatica, bunions, corns, bites, stings, boils, tumors, and a few other diseases that were not yet classified. In fact, almost every human or animal ailment, from hemorrhage to hemorrhoids—according to the doughty General—yielded to the potent powers of tobacco.

Some Therapeutic Properties of Tobacco

The “tobacco cure” had some following among the southern doctors, but the fad did not last long. Physicians found that the drug had undoubted medical properties, particularly when given internally in the form of a decoction—if the patient could keep it down. It relaxed muscular fiber, and was, therefore, valuable in strangulated hernia, intestinal obstruction, asthma, strychnine poisoning, and lockjaw; but, on account of its depressing action, only the seventh daughter of a seventh son, born under a caul, could tell how much to give. No one knew what constituted a dose, and in finding out by experiment there was a very likely chance of killing the patient.

It is highly probable that a mild cigar after meals, by increasing the flow of hydrochloric acid and pepsin, assists digestion. This may be owing to irritation of the gastric mucosa or perhaps it may be psychic in its origin—in other words, suggestive. Be that as it may, many millions of men regard a good dinner as merely the preamble to a good smoke.

The use of tobacco has also a stimulating influence upon intestinal peristalsis, and many thousands of men would be victims of the pill and enema-habit, were it not for the beneficial effects of that after-breakfast cigar.

The effects of tobacco, in ordinary dosage, are distinctly sedative. It creates a feeling of wellbeing and peace-with-all-the-world, that is equaled by nothing except hasheesh and cocaine. It blunts the keen edge of pain

and has a distinctly analgesic action in neuralgia, toothache or other forms of nerve irritation.

Another good feature in being thoroughly "smoked" is, that one is not nearly so appetizing to mosquitoes and other insects; in fact, there is a poetic justice in realizing that these little vampires will sometimes drop dead after sucking the blood of a super-saturated tobacco-habitué.

But Lady Nicotine Has a Shady Side, Also

Having said all the good things we can think of about the nut-brown weed, let us reverse the shield. In justification of the charges of its opponents, it must be admitted that this is a very sadly blurred and battered side. For, according to the best opinion of scientists who have investigated very carefully, Lady Nicotine is a twofaced jade, who holds out the lantern of promise to our eyes, only to break it over our heads.

Tobacco's delightful *dolce far niente*—so they say—is merely a stupor, the easeful sedation of a poison, relentless in its hold upon those who, too long, have worshipped My Lady of Nicotia. Now we are beginning to understand that she is harmful to our physical welfare, depressing to our nervous system, and destructive to our moral tone—particularly in the immature. Nicotine is a drug the effects of which cannot be guaranteed under the pure man law.

Practically all medical men agree that the excessive use of tobacco is dangerous. First, the smoke itself—by reason of the ammonia, carbon, and carbonic-acid gas which it contains—is irritating to the respiratory mucous membrane, setting up a chronic catarrh or some other subacute inflammatory process; next, the fine particles of carbon settle in the throat or in the lung-cells, causing irritation and "shortness of breath"; then, the ammonia "bites the tongue," dries the throat, and also has a deleterious effect upon the blood. The carbonic-acid gas in the tobacco-smoke produces dizziness, headache, and lassitude—permanently subsiding only with the removal of the cause.

Also, nicotine, which is absorbed from the end of the cigar or from the oil and water in the stem of the pipe, is a powerful narcotic poison. One drop, placed on the tongue of a dog (so we are told), will kill him "deader than a door-nail." In fact, if the nicotine contained in a single cigar were dissolved out and injected hypodermically into a human being who had not established tolerance for the drug, it inevitably would prove fatal.

It may here be noted that nicotine itself is not found in smoke, as it is changed by combustion into pyridine and collidine; still, these substances retain, in a degree, practically all the depressive qualities of their volatile ancestor. Also, the heavy odor of dioxide of carbon—one one-thousandth part of which will pollute the air of a room—is very unhealthful and obnoxious, even to smokers themselves.

Bad Effects Upon the Heart

The inhalation of smoke and the absorption of toxic byproducts into the circulation through the two thousand square feet of lung air-cell surface, arrests oxidation. Like alcohol, opium, and other narcotic drugs, tobacco retards the burning up of dead tissue. It prevents cell metamorphosis, and consequently impairs nutrition; for, in perfect metabolism, it is as essential to get rid of dead material as it is to build living structures: And, further, we cannot build living structures until the debris of the wornout cells has been removed. This explains why the use of tobacco in growing boys is most injurious; it stunts them, mentally and physically, and lays the foundation for the acquirement later of even more pernicious and reprehensible habits.

Next, the excessive use of tobacco unduly stimulates the nervous system and the action of the heart. When the products of cell decay are stored up in the tissues, the heart automatically pumps faster—as in the effort to oxidize an excessive amount of fatigue-poison generated by violent exercise. The heart is endeavoring to bring to the cells sufficient oxygen to burn up and convert their metabolic poisons; that is, the poison developed in the repair and destruction of cell-tissue. Vital energy is dissipated, for which there is no compensatory return. If this is long continued, the heart weakens, loses the regularity of its rhythm or even "skips" an occasional beat. In addition, it contracts more rapidly, and with unnecessary force, and then we have the serious state known as "smokers' heart." If the cause is not removed, the smoker will keep on "skipping," getting progressively worse, as the condition develops from functional into organic; and eventually he will skip to another land—where there is nothing else to do but smoke.

Sometimes, even though the patient reforms and gives up entirely the use of tobacco, the rapid heart action and irregularity induced by his former excessive smoking will be

permanent. A friend of mine has one of these reformed-smoker's hearts of twelve years' standing, and bids fair to keep it for forty-eight more—if he lasts that long.

Harmful Influence of Smoking Upon Mentality

Excessive use of tobacco, to many individuals, impairs the memory. It creates a sluggishness and apathy that reflect themselves in mental incorrelation—in an inhibition of the association impulses. It is asserted that in a period of more than fifty years no inveterate user of tobacco has ever carried off the first prize at Harvard College; and this is corroborated by the experiences of other schools where records have been accurately kept.

Those who believe that they think more clearly while under the influence of tobacco probably actually do think better, but this is because of the fact that the system has accustomed itself to tobacco—that a certain amount of the drug is necessary to restore what, to them, is a normal condition. Just as the alcohol-saturated cells of an addict cry out for sufficient alcohol, to permit them to function normally to their acquired pathological habit, so the nerves and cells of a constant tobacco user demand a certain amount of nicotine, in order to relieve abnormal nerve and body tension. It is because the tobacco-addict is not compelled to think about how badly he wants his smoke that he thinks better when he has it.

All college-men—and even most school-boys—know that, from the moment they begin training until they “break” again, the use of tobacco is absolutely interdicted. Experience has demonstrated that the “wind,” digestion, and heart are powerfully and unfavorably influenced by its use. No athlete who is called upon to expend his last atom of strength, skill, or endurance in friendly contest can afford the almost certain decrease in strength and skill or weakening of heart and “wind” which trainers know will inevitably follow dalliance with nicotine.

Consider next the influence of tobacco in undermining will-power and in predisposing to alcoholic excesses. It is maintained, by specialists in the treatment of drug- and alcohol-addiction, that dipsomaniacs whose periodic debauches seem to occur without rhyme or reason are victims of chronic tobacco poisoning, and that this poisoning is really the fundamental cause of their periodic inebriety. This is particularly true of cigarette-smokers and pipe- or cigar-smokers who “inhale” the tobacco smoke.

The explanation is, that these patients smoke themselves beyond the sedative stage and into a state of nervousness, then increase their smoking, in a vain attempt to gain sedation. Finally they become so nervous through tobacco excesses that they require a narcotic to quiet them, when they turn to our old friend John Barleycorn. Their jaded and harrassed systems are exceedingly intolerant to alcohol, for, after the first few drinks they are mentally “over the way.” They then decide that they might as well be drunk as be the way they are, so, go to the full spree.

The vicious cycle can be broken only by these men quitting tobacco. Unless this is done, they will continue to use—or rather abuse—both alcohol and tobacco. They can not stop drinking—and this is worth remembering—they can not stop drinking unless they first give up smoking.

Next—and this is interesting to the middle-aged who are developing a little blood tension, or whose arteries are losing elasticity—it has been shown that tobacco aggravates, if it does not cause, arteriosclerosis. This is owing to its stimulating effect upon the adrenal glands—those little bodies that sit like caps on the tops of the kidneys, and whose function is so obscure and complex. These glands, when overstimulated, secrete an abnormal amount of adrenaline into the circulation, which, on its part, in some inscrutable way has the effect of increasing blood tension and hardening the arteries.

Also, every eye-specialist has seen cases of toxic amblyopia (weakness of vision produced by poisoning), paralysis of the optic nerve or even optic-nerve atrophy (a destruction of the nerve-cells and their replacement by dense connective-tissue growth), which originated in the excessive use of tobacco. Unless the habit be stopped, the patient frequently goes to complete blindness, and with this hardening, even though smoking be stopped, he goes anyhow.

Cigarettes, and the Boy

Lady Nicotine's favorite method of winning young boys is, to break down their will-power. A typical boy “fiend” will lie, steal, and indulge in the most depraved and unnatural acts. In fact, the first step in the making of a “bad boy” is, to teach a good boy to smoke, especially cigarettes. From this humble but effective beginning, he may be depended upon to gravitate to liquor, “gangism,” and most of the crimes that may, ultimately, land him in a reform-school or the penitentiary.

Cigarette smoking is infinitely more pernicious than drinking; for, the drink-habit in boys is readily curable, while the cigarette-habit is but seldom eradicated. In fact, this habit is far more injurious than is any other form of tobacco-addiction, unless it be chewing. For, the byproducts produced by combustion of cigarettes are even more deadly than are the nicotine byproducts.

Among these cigarette byproducts (in addition to those of the nicotine group) we have furfural—one of the aldehydes (an alcohol deprived of its hydrogen) said to be fifty times as poisonous as ordinary alcohol. This is the drug which is chiefly to blame for tremors, twitchings, and transient irritations, and which explains very consistently the characteristic handwriting of the cigarette-fiend. In its cumulative and long-continued effects, it causes both true and hysteropilepsy, also muscular paralysis.

Another member of the malodorous family of aldehydes found in cigarettes is acrolein (or acrylaldehyde, for short), an intensely stimulating drug, with a decidedly depressing after-effect. When furfural and acrolein are inhaled (the smoke percolating through the lung cells), they cause a general irritation followed by narcosis, and by their continual use the nervous system is shattered.

In the English Army, among the troops on march or during active manoeuvres, the use of cigarettes has been absolutely prohibited. This, because so many of the men were developing "hearts"; that is, irregularities in the pulse rate and conditions which in one or two instances even were fatal in their effects.

While authorities differ as to the probability of cancer developing as a result of smoking, there is absolutely no doubt that lip-cancer (epithelioma) and cancer of the tongue and the throat have been traced to the irritation of the pipestem or the hot acrid smoke.

Tobacco is a strangling-clutch on the throats of most singers and speakers, depositing, as it does, irritating and "drying" particles of carbon in the resonance-chambers of the nose and oral cavity, and inflaming the delicate vocal chords and larynx with its acidity.

We can also say, with comparative certainty, that functional derangements of the digestive, nervous, and circulatory systems (manifested in headache, lack of appetite, dyspepsia, nausea, lassitude, lack of concentrative power, confusion of mind, indisposition to muscular effort, incoordination, and insomnia) frequently follow our treading the

primrose paths hand in hand with Lady Nicotine.

To the average man, the habit of snuffing seems most peculiar—one, apparently, without reason. There is, however, an appreciable amount of stimulus from the local action of tobacco upon the nasal mucous membrane. The snuffing is really a sort of homeopathic chewing.

Except among the more ignorant of Southerners, the practice of dipping a small brush or roughened stick of wood into tobacco and rubbing it on the gums or mucous membranes of the mouth is now almost obsolete. This manner of using produces a powerful excitation upon the nervous system. Also, partaking blithesomely of an infusion or decoction of tobacco is a custom that now happily is honored more in the breach than in the observance.

As to the Money Consideration and Statistics

With the cost of the tobacco-habit we are not here concerned. If it helps, it is—like anything else that is helpful—worth all its costs. Figuring that, if one saved his cigar-money for sixty years, he would have enough laid aside to put a new tin roof on the barn or to repair the automobile, doesn't "get anywhere" or convince anyone.

We do accomplish something definite, however, if we can prove—as did Ceisne, a French physician—that among 38 boys between 9 and 15 years of age, in 22 there were marked circulatory disturbance and heart palpitation; in 13, intermittent pulse; in 8, decided anemia; several suffered from nosebleed, insomnia, and nightmares; 4 had ulcerated mouths; and 1 had consumption; all as a result of tobacco-addiction.

Further, if we show that 11 of these 38 boys were induced to quit the use of tobacco and within six months were completely restored to health, we accomplish still more.

Accurate statistics are not obtainable as to the influence of tobacco in causing insanity, although many of the world's greatest authorities on mental diseases are convinced that it is a predisposing factor in a large percentage of the victims. There is no doubt that in the presence of an unstable nervous organism, nicotine is extremely detrimental. Just how detrimental, remains to be found out.

Life-insurance companies also have neglected a very fertile field for investigation, in not obtaining more definite actuary and mortuary statistics relating to tobacco-users, by listing smokers and nonsmokers separately, as many now do with drinkers. One New

York Company (The Postal Life) is taking this matter up, and in a recent bulletin it said: "We believe the attitude of the medical profession is rapidly changing toward tobacco, as it has changed toward alcohol." Which would indicate that this company has reason to regard tobacco as definitely injurious to the human organism. We are in the habit of looking to the insurance companies for accurately tabulated information in vital statistics: we might, therefore, recommend this subject to their attention.

It is a great pity that experiments of an exhaustive and convincing nature have not yet been attempted with tobacco, to determine, by instruments of precision, just what degree of deterioration, if any, follows its use. It is to be hoped that scientists, such as Professor Chittenden and Doctor Mendel, and others interested in physiological or psychological research-work, will undertake experiments like those of Professor Kraepelin's with alcohol.

These investigators might set aside a squad of, say, ten men who can stop smoking for a period, and at the start ascertain their maximum capacity for work, by means of the ergograph, "writing-balance," memory, adding and subtracting tests, and whatever else may appeal as of interest and conclusive. Then these same men should smoke or chew a definite amount of tobacco each day, and be subjected to the identical experimental tests; tabulating the results, and comparing them with the preceding tests. It would be interesting to try out the squad also on the hurdles, the track, the blowing-, punching-, and striking-machines, "chinning the bar," dumb-bells, weight lifting, standing on one foot or whatever else might serve to demonstrate muscular vigor and coordinate power; and then compare the before and the after results of this work. These experiments, if the results of the tests bore out clinical find-

ings, would give us a mass of irrefutable data, extremely valuable and helpful, and which, incidentally, would make very interesting reading.

Various methods have been employed to render tobacco less harmful, among them many attempts to extract the nicotine (which usually "runs" from 1 to 8 percent). Perhaps the "de-nicotined" or "hygienic" cigars now sold in France and Switzerland come nearest to this aim; the method employed being, to soak the leaves in fresh water for an hour, then drying them slowly in the sun. In this way, a large percentage of the nicotine is dissolved out of the tobacco; enough, in fact, to render the water fatal to plant-lice. In tobacco thus purified, the harmfulness is reduced to a minimum; but the resulting flavor of hay is not likely to appeal to seasoned smokers.

A divorce, or at least a legal separation, from Lady Nicotine has been secured, "for cause," by some of her most abject and long-serving bondsmen. In this connection, the story of the old chap of sixty-five, who had been a constant chewer and smoker for almost fifty years, comes to mind. This man announced at a gathering of his old cronies that "he was going to quit for good." When pressed for his reasons, he declared, with much feeling: "If I ain't careful, this durned thing will fasten itself upon me as a habit."

And, after all, that is what it is—a habit. Whether it is fraught with much good and a little bad, or much bad and no good, depends upon whether we use or abuse the habit. Whether we are greatly to be injured, or mildly benefited, depends upon who is "boss." If Lady Nicotine holds the whip-hand, we are in the power of a notorious slave-driver. If, on the contrary, we have her trained to obey our intelligence, she is a beneficent matron. And that reminds me—my supply of cigars is getting pretty low.



Diseases of the Alimentary Canal

By A. L. BENEDICT, A. M., M. D., Buffalo, New York

Editor of "The Buffalo Medical Journal"; Author of "Diet in Health and Disease",
and "Golden Rules of Dietetics".

EDITORIAL NOTE.—*This is the fifth paper in Doctor Benedict's series dealing with diseases of the alimentary canal. We are sure that every reader of "Clinical Medicine" will be pleased to learn that these articles will be continued for several months.*

V. VARIOUS FUNCTIONAL DISTURBANCES.

WHILE a tabular classification is of value in fixing ideas, no such ideal classification of stomach disorders, as has been mentioned, along the lines of increase and decrease of the three cardinal functions of motion, secretion, and sensation, satisfactorily disposes of all the nonorganic conditions encountered. In fact, so far as the writer's observation goes, nature never submits kindly to braces with Roman and Arabic numerals, capital letters, small letters, and Greek letters for subdivisions in parenthesis. Hence, various other functional disturbances, more or less confined to the stomach, will be considered, without attempting any logical classification.

Eructations—"Gas in the Stomach"

Eructation consists in the expulsion of gas, or of a small amount of liquid or pultaceous stomach contents, or both. Any large accumulation of gas in the stomach should escape through the cardia or the pylorus, and it is obviously difficult to formulate concise statements as to the relative tonicity of the two sphincters, or of the relation of sphincteric tone to expulsive muscular contractions of the entire gastric muscle, or to extrinsic expulsive factors such as respiration, abdominal strain, compressive force or blows on the body-wall.

Gas in the stomach arises from three principal causes, namely: air swallowed, either in hasty eating or aspirated in aerophagia (*q. v.*); volatile substances and true gases produced by fermentation; gas produced chemically by the mingling of carbonates and acids (with which may be included the swallowing of beverages already charged), as by taking sodium bicarbonate or both acid and carbonatic chemicals as in the seidlitz powder and many proprietary laxatives, or by the union of acid gastric contents with the carbonatic secretions of the liver, pancreas, and intestinal glands, the pylorus being sufficiently open to allow this gas to enter the stomach.

As to the first, it is only necessary to remark that certain persons seem to have such

a conformation of the throat and muscular action of the pharynx that air is inevitably swallowed in considerable quantity, however careful they may be in eating.

As to the third, it should be pointed out that, if there is an ulcer of any kind or if the cardia does not readily allow the eructation of an excess of gas, great caution should be exercised in the administration of effervescing mixtures or of any carbonate which, with the probability of the presence of an acid reaction at any time during the period of active gastric digestion, will produce effervescence. So far as the effervescence from physiologic secretions are concerned, it should be remembered that this phenomenon is normal, that it expedites peristalsis and the floating function of the intestine, that so long as the pylorus closes firmly after each escape of gastric contents into the duodenum, no appreciable quantity of gas can enter the stomach; but that, in hyperchlorhydria or euchlorhydria or even in hypo- and in achlorhydria, if the total acidity is considerable, a relaxed pylorus allows considerable quantities of gas to enter the stomach, and to cause more or less distress, according to the tonicity of the cardia.

Fermentation-Gas Not Common

So much has been written and spoken about fermentation-gas that it might seem useless to dwell on this subject. But the writer wishes to urge the routine examination of stomach contents, including vomited matter, with reference to this point. All that is necessary is, to place the chyme in a U-tube, such as a ureometer, or in the Schmidt apparatus for collecting fecal gas, and let it stand at about the body-temperature for twelve to twenty-four hours. It is not even necessary to have an incubator, as almost any house furnishes some place at the top of a room or over a radiator or stove that maintains a sufficient temperature steadily enough for approximate purposes.

If one will make this test as a routine for even a few months, he will be greatly surprised and will have fixed in his mind certain general facts of the utmost importance. If there is any considerable amount of hydro-

chloric acid present, say above 15 percent decinormal, it is only under the most unusual circumstances of saprophytic involvement of the food that more than a few bubbles of gas will form, even after twenty-four hours' delay. Even, frequently, in marked hypochlorhydria, achlorhydria, and achylia, gas will be formed only in minute quantity. With rare exceptions, the total gas formed by fermentation in twenty-four hours amounts to not over 50 percent by bulk. Yet, we have been asked to believe, as a profession, that the same process occurring in the stomach will yield enough gas to pouch out the cheeks (about 50 Cc., as can be determined by collecting in a water-trap) every few minutes, from a content of 1000 Cc. down to 100 Cc. It will also be learned that the cases that actually do yield copious eructations of gas show only a few bubbles on incubating or, at most, what would represent one-half or two-thirds of the bulk of the stomach contents in twenty-four hours.

The differential diagnosis of eructation of swallowed air or gas generated chemically from seidlitz powder, sodium bicarbonate, etc., is easily made, since the belching stops shortly after the gas has been swallowed or generated. Quite rarely there is fermentation of the amount conceived of in descriptions of eructations due to fermentation, but only when the food is grossly contaminated or there is marked stagnation, abundance of yeast cells and bacteria in the stomach.

Now, if one wants to know why belching of considerable magnitude can occur when a sample of the same stomach contents yields only a small amount of gas by fermentation in a tube for twenty-four hours, let him take the small 1-Cc. curved tube, provided with the ureometer for adding urine to the hypobromite solution, and introduce into the stomach contents a saturated solution of sodium bicarbonate. Excepting very marked intestinal fermentation with regurgitation into the stomach, analogous effervescence with the physiologic carbonatic secretions is the only explanation that occurs to the writer.

After this somewhat lengthy discussion, a formal presentation of differential diagnosis of the nature of eructations scarcely is necessary. Having determined more or less probably the nature, the treatment will be more logical. For example, if the cause of the gas is air-swallowing in the literal sense (aerophagia will be discussed later), the only treatment consists in advice as to habits of eating. In fact, it is the opposite condition of *gastric distension*, or ballooning, that needs to be

treated, even by intubation, in order to evacuate the air, in extreme cases in which the pressure on the heart is serious.

Diet Useful When Eructations Occur

If the eructations are of moderate amount, occur late after a meal (that is, late enough to exclude air swallowing), and occur at rather long intervals, and if presence of fermentation-gas is actually shown by the tube-experiment, the diet must be as nearly sterile as possible, oral asepsis—including dental attention if necessary—must be enforced, digestive defects must be remedied, stagnation must be offset so far as possible, and, finally, but perhaps not so unimportant as some authorities aver, antiseptics may be used. Of the latter, a great variety is available; among which menthol, salol, salacetol, diaspirin, bismuth salicylate, and orthoform may be mentioned; also, thoroughly dry animal charcoal in adequate dose (1 Gram or more) may be taken to absorb the gas.

On the other hand, if the diagnosis of fermentation-gas is made by reason of preconceived notions, when the real cause is a mingling of acid gastric contents with alkali carbonates of the joint intestinal secretions, then, of course, antiseptics will fail; the clinical evidence against them probably being mainly based on their employment under improper conditions.

If there exists a genuine hyperchlorhydria, the treatment directed especially against the gastric secretion, as already detailed, may be adopted. If hydrochloric acid is not in excess or even is deficient, so that the carbon dioxide is liberated by acid factors of another kind, we have the more difficult problem of controlling a relaxed pylorus—which the writer has already discussed; not very satisfactorily, it is true, because of inability to solve the problem in a way one might wish.

Pyrosis, Heartburn

Pyrosis, while often used as a synonym for heartburn, usually is made to imply also the eructation of liquid or semiliquid matter, especially of acid nature. It may have been noticed that under the head of Eructation only the belching of gas was considered, so that here we may limit the discussion to the liquid and pulaceous chyme brought up, and, as a matter of convenience, will include a consideration of chyme of any nature, without special regard to the sensations in the stomach.

Belchings of this general nature are distinguished from vomiting both by their small amount and by the absence of nausea. But,

in the first stage of seasickness (to which the term nausea literally applies), nausea is not necessarily present and the patient is rather surprised when the raisings from the stomach become of larger amount and are attended by nausea. So, belching from any other cause may grade into vomiting.

The acute observer will discriminate between belching of liquid and pultaceous cyhme accidentally accompanying eructations of gas, and that in which there is a less explosive but more strictly peristaltic raising and no gas. If the latter, the diagnostic and therapeutic attention must be directed toward the motor function of the stomach, particularly the relaxation of the cardia and the more or less probable spasm or obstruction of the pylorus. These matters have already been considered.

Mericycsm

Mericycsm is a form of quiet belching, without eructation of gas, and by some is considered as a reversion to the physiology of ruminants. It is one of those neuroses which do not ordinarily occur in typically neurotic patients and generally is considered a form of self-indulgence, the patients being described as enjoying the repeated tasting of the food, which is unchanged in flavor and not acid—implying that the neurosis occurs early after a meal or that, if occurring later, there is a lack of hydrochloric secretion, if, indeed, peptonization has occurred at all. The description also implies the absence of entry into the stomach of bile, pancreatic juice or intestinal contents through regurgitation. It is also commonly stated that many subjects of mericycsm can bring up any single ingredient of the meal at will.

If we scrutinize this description of mericycsm critically, several incongruities appear. First of all, it is highly improbable, to say the least, that the stomach has any such voluntary and selective power as is implied in the last statement. Secondly, it is improbable that there is either a delay or characteristic lack of secretion and digestion on the one hand and, in such absence, an absolute closure of the pylorus against intestinal contents and an inhibition of fermentative changes on the other hand. In fact, all there is to mericycsm is, that certain persons rather enjoy the belching up and tasting of stomach contents; that, along with that of their esthetic sensibilities, there is a greater or less obtunding of the sense of taste so far as digestive, fermentative and intestinal changes are concerned; that some subjects more or less deceive them-

selves or their attendants into the belief that only certain articles are brought up from the stomach. Consequently, these cases should, for practical purposes, be considered as ordinary belching plus a perverted enjoyment of the condition.

Hiccough

Hiccough is an intermittent inspiratory effort, interrupted by the closure of the glottis. It is not, strictly speaking, in any sense a gastric neurosis. It is frequently seen in the dying, in those intoxicated, and in those partly under the influence of ether or chloroform, either at the beginning or the end of the anesthesia. It will be observed that alcohol and ether differ only in a way as do the hydroxide and the oxide of magnesium.

In this group of cases, it is questionable whether the glottis is closed so much by spasm as by paralysis and entrance of mucus. Ordinary hiccough is induced by rapid deglutition, by swallowing dry substances, and perhaps by consequent direct irritation of the glottis by foreign particles; and it is relieved by rest, drinking of water, forced voluntary respiration, and other measures. Like almost any other abnormal muscular phenomenon, it may be due to accidental location of a hysteric influence; or the excitoreflex may be quite local and may consist in almost any abnormality of the larynx, pharynx, fauces, tonsils, or posterior nares; or it may be distant and may consist in some gastric irritation, with or without organic lesion, gallstones, inflammation of the biliary passages, and various other digestive conditions.

Obstinate hiccough is quite likely to occur in persons suffering from hepatic sclerosis, but whether the latter lesion has any direct causal relation is doubtful.

Although nearly always it is a trivial matter and can be relieved by simple means, hiccough may prove a very serious, exhausting reflex and even may result in death. Here, the customary mild sedatives are ineffectual. Full anesthesia, together with concomitant stimulation by means of heat, strychnine, digitalis, and so on, also, traction of the tongue, passage of an esophageal bougie, gastric lavage, applications of local anesthetics to the fauces, pharynx, and larynx, the application of faradism or of galvanism, thoracic strapping, intubation of the larynx, free catharsis, suggestion (including that of deep breathing, with protracted attendance and suggestion for almost every breath) are among the various means to be thought of, upon various theories of action.

Aerophagia is similar to hiccough in its nature, with, however, less marked spasm; there is distention of the esophagus, so that air is brought into the latter, or even into the stomach, through the negative thoracic pressure, the air being intermittently regurgitated, as a rule quite audibly. This phenomenon is a neurosis quite analogous to that of cribbing of horses. Unlike many neuroses, attacks mostly are induced so readily that ample opportunity is afforded for observation. The patient is apt to regard the phenomenon only in its expiratory phase, and the physician, too, may be deceived into a diagnosis of eructation. The steadiness of the procedure, the amount of gas evacuated, the distinct neurotic element, as also auscultation, will afford the differential diagnosis.

A predisposing cause—such as adenoids,

pharyngeal or laryngeal inflammation, nasal polypi, movable kidney, gallstones, chronic appendicitis, or any one of a wide variety of abdominal and pelvic conditions—may be discovered, but relief of the “cause” is likely to prove unsuccessful as to the reflex by reason of the establishment of the neurotic excitoreflex current.

While resort may be had to general treatment, relief of any discoverable lesion for its own sake, and local treatment by the passage of the esophageal bougie or tube, or applications of anesthetics and astringents, the only treatment that has proved radical in the writer's experience is a full explanation to the patient of the neurotic element in his trouble and the enlisting of his efforts to stop the disagreeable habit.

(To be continued)

The Doctor's Horse

By NELSON S. MAYO, D. V. S., Chicago, Illinois

Secretary of the American Veterinary Medical Association

Soundness

THERE is a peculiar, one can almost say fascinating, interest in the subject of soundness or unsoundness of horses. It is to this that horse trading largely owes its attractiveness. The defects and idiosyncrasies of horses are so many, the opportunities for deception so numerous, and the inherent pride of almost all men in their fancied ability to detect unsoundness is so great that nearly everyone who has “swapped” horses sympathizes with the New England deacon who was fearful of feeling lonesome in Paradise without a horse trade in sight.

A physician who contemplates purchasing a horse upon the market will find it economical to secure the services of a reliable expert to pass upon the question of soundness in the horse; but even then generous allowances must be made, for there are peculiarities of horses, as well as of humans, that are not apparent until you have lived with them for awhile. If possible, secure a warranty from a reliable dealer and also the privilege of a thorough trial.

In examining a horse for soundness, it is assumed, in the premises, that the animal possesses every disease, deformity, and vice that horseflesh is heir to, and then by a careful, thorough examination and test one proceeds to prove their absence. And such examination should be conducted without in-

terference of any kind. It is a frequent trick of unscrupulous horse-dealers to call attention to a part of the body that they know to be normal, in order to distract attention from an unsoundness in some other part. As an experienced horseman once said to the writer: “If a man calls my attention to a horse's hock, I make a particular examination of the eyes.”

Where it is possible, it is a good plan to examine a horse in his stall under normal conditions for stable vices. Besides these vices, there is a peculiar nervous condition resembling stringhalt, which can be detected only in this way. This consists in one or both hind feet appearing as if glued to the floor; however, after an effort the foot is jerked up, whereupon, after a few steps, the legs “limber up,” so that the defect is not noticeable.

Among the stable vices to be looked for is “weaving,” a habit consisting of swaying back and forth, sometimes for hours. Stall kicking and persistent pawing are other vices, as is crowding a person against the stall. Signs of “cribbing” should be looked for in the stall, and the manner in which the horse is tied should be noted. An unusually strong halter or rope about the neck is an indication of halter pulling. The horse should stand squarely on its feet. If it “points” a foot, it indicates soreness or lameness. After the stable examination, the horse should be



A Good All-Round Doctor's Horse

taken where there is good light, then, beginning at some definite point, such as one of the nostrils, the whole animal should be gone over carefully.

The nostril should be examined for evidences of glanders or any other abnormal discharge; any abnormal odor of the expired air is taken note of. The mouth should be examined as to age, the incisor teeth for evidences of cribbing or "parrot-mouth," the molars for irregularities or disease. The saliva should be free from disagreeable odor. The tongue should be in normal position and free from scars. The latter indicates the use of a harsh bit and must be carefully considered. The great and common "bugbear" of "wolf"-teeth may be of interest.

"Wolf"-teeth are supernumerary rudimentary molars, and are frequently observed in young horses, just in front of the first molar on the upper jaw, less frequently on the lower jaw. Probably fifty percent of horses under

5 years of age have these rudimentary teeth. There is a popular belief that "wolf"-teeth cause blindness, but this is not true. Veterinarians usually extract them, as they are useless, while a bit drawing against them may loosen the teeth and cause a sore mouth.

The right side of the face and lower jaw should be free from scars, fistulas, and enlargements. Fistulas from ulcerated molars or rupture of Steno's duct are quite frequent. The submaxillary lymphatic glands should be normal in size and freely movable.

The eye should be full, clear, and free from abnormal specks, cloudiness, and sedimentary deposit at the lower part of the anterior chamber; which latter, if present, indicates periodic ophthalmia—a disease that sooner or later will cause permanent blindness. In order to learn how the iris responds to light, the eye should be closed by placing the hand over it. The pupil of a horse's eye is oval, and often the edges are fringed with pigment

globules commonly called "soot-balls." These vary greatly in number and size; they are of no pathological significance, however.

The top of the head should be examined for poll-evil or enlargements, and also to determine whether the horse objects to having its head or ears handled. For some horses a stepladder is required to put on the bridle or halter.

The throat should be examined for goiter and for evidences of a cribbing-strap having been worn. The mane always should be thrown to the opposite side and the neck examined for brands, particularly the letters I. C., the latter showing that the horse has been inspected and condemned in the army service, usually because of unsoundness.

Looking Over the Shoulders and Front Legs

Turning to the withers, look for fistulas or swellings. On the shoulder look for sweeney and tumors. Shoe-boils or capped-elbow is plainly evident. Inspect carefully the knees, to see that they are not "sprung" (clergy-men's knee) or scarred on the front from stumbling. Below and on the inside of the leg, splints frequently are found, but generally they are of little importance in young animals. "Wind puffs," ringbones, enlarged tendons, evidences of "firing" or of operations for neurectomy (nerving), interfering, or the use of cocaine hypodermically, to disguise lameness, all should be looked for. On either side of the top of the heel the lateral cartilages should be examined for "side-bone."

The foot should be of good size and shape, free from rings of horny growth, and the wall not concave. The heels should not be contracted. The wall should be carefully examined for sandcracks, quarter-cracks, and seedy-toe, the latter a softening and degeneration of the wall at the toe of the foot. The bottom of the foot should be examined for corns, the cleft in the frog for thrush, and the sole for bulging.

Defects of Rump and Hind Legs

After finishing the fore leg, the examiner should go carefully over the horse's side and belly, looking for tumors, sores, hernia, and rupture. In the male, the penis and sheath should be examined for tumors or disease. The scrotum in males always should be examined for tumors, while geldings must be scrutinized, to be sure that they are not "ridglings," or cryptorchids. In examining the hind legs of a strange horse, it is always well to take precautions against being kicked,

by having an assistant hold up one of the animal's fore feet.

The muscles of the hip should be examined for scars, the stifle-joint, and for any enlargement or soreness that would indicate stifle. A thorough examination should be made of the hock-joint, because of the number and importance of defects that may occur in this region. The back of the hock-joint should be examined for capped hock, curb, and scars that may indicate the animal to be a kicker. Just in front of the point of the hock, look for thorough-pin. The hock-joint proper is to be examined for spavin, both bone-spavin and bog-spavin; also for any enlargements and for irregularities of movement. Below the hock, look for wind-puffs, ringbones, scratches, and diseases of the foot. After completing the examination of one side, go over the opposite side with equal care.

Other Points to Be Observed

After thus going over the entire horse, the examiner should carefully compare corresponding members with regard to their symmetry and form. The two hips should be compared, to see that one is not "knocked down" or "hipped," and that the muscles are equally developed. The tail should be carried squarely; it should be handled and a line or rope drawn under it, to prove that the horse is not vicious in this respect. The nostrils, lips, eyes, and ears should be compared, and any signs of paralysis or drooping of the parts noted.

After examining, manipulating, and comparing the parts of the animal, it should be thoroughly tested in its paces. The horse should be driven, or, with plenty of rope, led to and from the examiner, and then moved by him at a good, free trot; any signs of lameness or peculiarities of movement being discoverable in this way. Turning the horse sharply to the right or to the left, so as to bring the weight alternately on the right and the left legs, generally will increase the signs of lameness.

The horse should also be tested as to its ability and willingness to back a load. In testing for the wind, the horse should be allowed a full drink of water, then by some one else ridden or driven rapidly for some distance, and then brought to a sudden stop, close to the examiner. The latter now will look for any abnormal sounds or movements in breathing.

A "wind-broken" horse can be detected by the peculiar roaring or whistling heard as the air is breathed in. In heaves, there

usually is difficult breathing, with a peculiar bellows-like motion of the flank. By pinching the animal's throat, the peculiar and characteristic grunting cough of heaves will be emitted. The horse should also be tested as to whether it eats and drinks properly.

The ability to detect unsoundness can be greatly increased by practice and close

observation; nevertheless, some diseases and vices can not be detected by an ordinary examination, and it is only after a person becomes familiar with the animal that these will be discovered. In purchasing horses, allowance at all times must be made for these uncertainties.

[To be continued]

The Action of Sparteine Sulphate in Laboratory Experiments

A Rejoinder to Doctor Pettey

By LESLIE BYRON WIGGS, M. D., Richmond, Virginia

DR. GEORGE E. PETTEY, of Memphis, Tennessee, in THE AMERICAN JOURNAL OF CLINICAL MEDICINE (January, 1915, p. 46), in a review of a monograph by me on the action of sparteine sulphate*, takes issue with most of my findings. If it were not for the high standing of Doctor Pettey in his profession, I should not deem it necessary to attempt a reply. When, however, an authoritative article appears, it should be scrutinized with utmost caution and thoroughness, and opinions expressed only after the most careful consideration. In this light, I have reviewed his work, and still find it necessary to hold to my previously expressed opinions, and I, therefore, shall attempt to show that he has not proven his case.

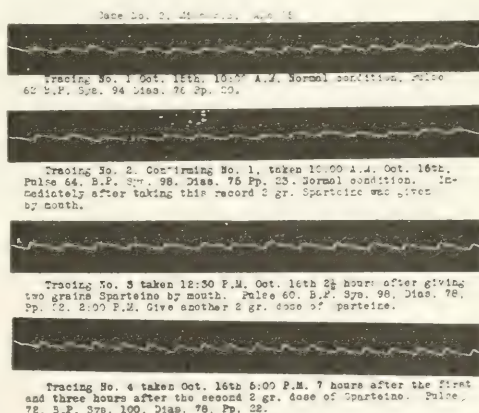
The chief criticism of my article is based upon the fact that the tracings shown by me were made from the lower animals, rather than from the human subject, and, hence, are not to be considered reliable when applied to mankind.

I wish to make it perfectly plain that I do not concede this point. It is based largely upon a faddish theory, rather than on proved truths. I do not consider that the tracings submitted by Doctor Pettey prove a single point made by him, nor do they disprove any hypothesis proposed by me. If he intended them to prove that sparteine sulphate in full dosage does not depress the heart in normal human beings, his tracings are not conclusive evidence of the fact, and neither do they support his theory of an increased cardiac tone. His data are too incomplete.

In each of his cases from which tracings are shown, there is an apparent lowering in

the blood pressure, which, however, is not shown in the blood pressure estimations (there is no fall in the blood pressure); which, as is well known, should be concomitant with the sphygmographic record of such. Such a result could come from faulty adjustment of the instrument.

Further, there is no slowing in the pulse rate, which probably would be present had the sparteine caused the results; for, clinicians and pharmacologists are about agreed



that one of the dominant actions of sparteine is the increase in vagal tone.

As a matter of fact, I believe that it would take considerably more than the ordinary therapeutic dose of any depressant drug to produce apparent cardiac depressant effect in normal individuals. Members of the methane series, for instance, such as hydrated chloral and also the coal-tar products, when given in sufficient amounts, will produce cardiac depression, but an ordinary therapeutic dose probably never does in normal hearts. Their

*Old Dominion Journal of Medicine and Surgery, May, 1914.

chief danger lies in giving them to individuals with damaged hearts or to those having a peculiar susceptibility to the drugs.

In analyzing his cases reported, we will take case No. 2 as fairly illustrative. In this, we find the normal conditions as follows:

Pulse rate, 64; blood pressure, systolic, 98, diastolic, 75; pulse pressure, 23.

Two and a half hours after giving 2 grains of sparteine by mouth we find the following:

Pulse, 60; blood pressure, systolic, 98, diastolic, 78; pulse pressure, 20. Whereas, the tracing shown indicates a fall in the pressure.

This kind of a record could not be produced by a relaxation of the vessels, unless there was a concomitant *fall in the blood pressure*. If the vessels relax and the heart contracts more forcibly and compensates for the fall in pressure, that otherwise would occur, then the vessels still remain filled, so that a sphygmographic record would be that of the normal condition, that is, would undergo no change. Therefore, I cannot reconcile Doctor Pettey's statement, that "it adds tone to the heart-muscle and increases the force of its action, while at the same time, by dilating the arterial capillaries, etc.," when his tracings indicate that the pressure has fallen, while his sphygmomanometer estimations show

that the *pressure has not materially changed*. His sphygmomanometer results and his sphygmographic tracings contradict each other. Incidentally, a sphygmograph at its best is a very poor instrument from which to draw valuable clinical conclusions.

Conclusions

1. Doctor Pettey has offered no evidence that proves that "sparteine sulphate is a powerful and positive cardiac tonic."

2. His tracings do not show that the "arterial capillaries are dilated"—they rather indicate a fall in blood pressure; which, however, is not indicated by his sphygmomanometer.

3. He has not proved that sparteine sulphate does not depress the heart. He may have shown by his sphygmomanometer that it did not cause apparent cardiac depression when given in one or two doses to individuals with normal hearts.

4. He has not proved that the action of sparteine sulphate on the cardiovascular and renals systems of dogs and frogs is not similar to its action on the human subject. He hinted at such an hypothesis, but offered no definite evidence to support the theory.

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Medical Abstainers Called For

By T. D. CROTHERS, M. D., Hartford, Connecticut

THE following incident is unmistakable evidence that laymen are making discriminations and drawing sharp lines in selecting medical men.

A wealthy manufacturer had an only son taken ill with appendicitis. The family physician, not wishing to take the responsibility, advised that a very distinguished surgeon should be called in. The surgeon arrived on a cold winter's night and was seated in the parlor. The manufacturer came in, was introduced and, after looking at the caller very sharply, said: "I regret intensely, but I cannot avail myself of your valuable services. For thirty years I have employed many hundred men in my business, and I have made it a rule never to permit anyone with an alcoholic breath to perform any responsible work for me; and I can not depart from this rule now. I shall pay you your fee and you may return by the next train."

The surgeon was astonished and confused. The night was cold and he had taken a glass

of spirits to steady his nerves. He was not a drinking man, but occasionally he drank in an emergency, and considered himself temperate. The family physician performed the operation, which was successful; and the surgeon no doubt realized that a change had begun in public sentiment regarding the danger of men with alcoholic breaths.

Another incident was that of the manager of agencies for a large insurance company, who called on one of the general examiners, a physician of considerable prominence, who had examined for the company for a great many years. The physician was a surgeon and had just come from the hospital. His breath was strong of alcohol and his manner was boastful and effusive. The manager listened to him for a little while. A few weeks later a notice from the company indicated that his services would be no longer needed. He was very much astonished and demanded some explanation. After some correspondence, he was told that the company had decided not to employ any drinking

men as examiners. He was still more incensed when a young man known as a total abstainer took his place. He denied being a drinking man, but had to acknowledge that he drank after the strain of surgical operations.

These are conclusive hints that the moderately drinking doctor is disappearing from active service. The oldtime legend, that such men were very often far more acute and reliable after using spirits than before, is also passing away.

Business men everywhere demand the very best services from persons whom they employ and are growing more and more distrustful of anybody who uses spirits, no matter in what degree. Persons occupying responsible positions are scrutinized very carefully concerning their habits, particularly of the use of spirits, and very often are rated on this quality alone.

The mercantile agencies and the bonding companies, who are probably the sharpest observers of conduct and habits in the active business world, rate drinking men very low, and the bonding companies frequently refuse to carry them at any cost. This is the result of experience and is based on no theories or sentiment. Persons who handle finances and are responsible to others are weeded out very quickly upon the slightest suspicion of having drinking habits.

Even drinking families who have wine served at the table are beginning to call for total-abstaining physicians and drop the convivial doctor who is ever ready to join them in the social glass.

A financier who left a large sum of money to a hospital suddenly withdrew his legacy. When pressed for an explanation he declared that many of the staff of the hospital were drinking men and their work would necessarily be inefficient and careless, and in the business world he would not put in any money where drinking men would have any kind of control. It was too risky. He would renew his legacy, with great additions, if the hospital authorities would accept it with the provision that all members of the staff should be total abstainers. This has been under consideration for the last year.

The president of a railroad company found his wife at a seaside resort being treated by a very eminent expert. At the table he noticed that this physician ordered a bottle of wine and later he saw him take a drink in the bar-room. He discharged him at once, and when questioned by his friends answered: "I should not allow a switch- or a tower-man on my road to use spirits and I have given orders

that they be discharged the minute they are found guilty. How much more important it is, that I should guard my family from the dangers of this source."

Incidents like these are increasing all over the country. Medical men trained to give the best service on health matters are called for. The unhealthy, the beer-drinking, the alcoholic, and tobacco-smelling doctor repel the intelligence of the man or woman who are looking for ideals. There is no sentiment in this, and it may not be expressed, but it is growing constantly. At one of the large hospitals a man who was to be operated upon made a special request that the operating surgeon should be an abstainer and that he should take no spirits before the operation. He evidently had some knowledge of the habits of surgeons in the hospitals, and it is altogether likely that his request was complied with. It used to be a common thing for surgeons and visiting doctors to take spirits preceding and after the day's work was over, and this explained the spirit bills which were far in excess of the natural demands from patients.

There is great chance for improvement in this direction. In private practice, the success or failure of many medical men has turned on their drinking-habits. In some sections where the sentiment of prohibition is very strong, and in every section, business and thoughtful men realize that the use of alcohol for tonic and stimulant properties is a very uncertain and dangerous thing.

The modern doctor will have to be careful of himself and of his ideal of health before he can build up a patronage. A great deal of the injury comes from faults in medical teaching. There is not a college in the country in which some of the professors and teachers are not moderate or excessive drinkers. Their examples are fatal to the prosperity of the coming medical man. They belong to an older class of men, who are not yet free from the delusions and paganisms of the past. Some of them still teach that alcohol has a power and is a stimulant. Others are noncommittal. A popular teacher who takes wine at the table and is seen drinking spirits in the club and is known to the student as a convivial man is exerting a very dangerous influence.

Not far away in the future medical men will be called for who represent in themselves the highest types of physical and mental health. Colleges and training will be of minor consideration compared with a robust, temperate, common-sense, strong man.

What Others are Doing

METHOD OF DIAGNOSING DISEASE OF THE LUNG-APEX

In the opinion of R. Ehrmann, of Berlin (*Berl. Med. Woch.*, 1914, No. 35), the frequent difference in the irritability of the dilator pupillæ muscles of the two eyes often is markedly augmented when the apices of the lung (either one or both) are diseased, as becomes evident when the oculomotorius muscle has been paralyzed by the ingestion of atropine.

A SIMPLE TREATMENT FOR FELONS

A method of treating felons that is very simple and said to be very satisfactory, is described by Beverly Robinson in *The New York Medical Journal* for June 27, 1914. He advises applications of a mixture of equal parts of glycerin and a saturated solution of magnesium sulphate, this being applied by means of gauze saturated with it, covering the dressing with absorbent cotton and thin rubber tissue, held in place with a gauze bandage. This dressing may be removed from time to time, and, after soaking the fingers in a hot borax solution for fifteen or twenty minutes, the glycerin and magnesium sulphate may be reapplied.

Doctor Robinson goes through this routine of redressing and soaking in borax solution some two or three times every twenty-four hours. When the inflammatory process is under control and recovery seems assured, applications of zinc-oxide ointment may be made every night at bedtime.

ETHYLHYDROCUPREIN (OPTOCHIN) FOR CREEPING ULCER OF THE CORNEA

In a contribution to the *Deutsche Medizinische Wochenschrift*, 1914, No. 35 (cf. *Muench. Med. Woch.*, 1914, No. 37), M. Schur reports his experience with ethylhydrocuprein (optochin) in the treatment, at the clinic of Tuebingen, of pneumococcic ulcer corneæ serpens—positively pneumococcic infection, 35; presumably so, 3; mixed 2. There was no actual

failure to cure in 34 of the positive cases, but in 30 healing was rapid under the cuprein applications alone; the 3 presumptive cases also were promptly beneficially influenced; while in the two mixed cases action was less energetic and had to be supported by zinc applications.

The treatment should be instituted as early as possible. It is important to remember that the solution should be freshly made; hence, be prepared in only small amounts. If the diagnosis is uncertain (bacteriologic tests being unattainable), the practitioner may proceed prophylactically, by instilling into the eye a solution containing 1-2 per cent of zinc (sulphate?), in addition to 2 per cent of cuprein; for, nearly all serpiginous ulcerations are caused by pneumococcus and diplococcus invasion. The cuprein does not, in general, relieve the accompanying iritis.

SUGAR AND CHARCOAL AS A WOUND DRESSING

While sugar of late is being introduced (Magnus) as an antiseptic for wounds, A. Koehler, of Berlin, now points out (*Deut. Zeit. f. Chir.*, 1914, No. 4) that this practice was in vogue in India as long ago as 300 to 600 A. D. Charcoal, now again introduced by Hammer, for the same purpose, also was in use long ago, although at a later period than sugar dressings.

SACCHARIN IS NOT HARMFUL

As doubtless every reader of CLINICAL MEDICINE knows, the use of saccharin in food products is forbidden by law. However, it is believed the consensus of opinion among really scientific men is that when saccharin is used in foods in reasonable quantities, it is perfectly harmless. Evidence to this effect is accumulating; and this fact is emphasized in a paper by Dr. Charles E. Caspari, professor of chemistry in the St. Louis College of Pharmacy, published in the February, 1915, number of *The American Food Journal*.

This writer cites the investigations of the Referee Board, of the United States govern-

ment, which investigated the alleged harmfulness of saccharin and finally came to the conclusion that quantities of this substance up to 0.3 Gram (4.6 grains) per day can be ingested without injury to one's health. When large quantities of saccharin are taken, say, for instance, 1 gram (15.4 grains) daily for a considerable period of time, especially when continued for months, the Referee Board admitted it might induce disturbances of digestion. Inasmuch as saccharin is 550 times as sweet as sugar, the 4.6 grains of saccharin mentioned above would have a sweetening power of 5.8 ounces of sugar, an amount much more than is likely to be consumed daily by any ordinary individual.

Even more striking is the report recently promulgated by R. O. Neumann of the German Institute of Hygiene, who, at the request of Lehmann, of Wuerzburg, carried on an extended series of experiments designed to determine the harmfulness or harmlessness of saccharin in foods. His conclusion is, that 3 1-2 Grams of pure saccharin—corresponding in sweetness to 1575 Grams (nearly 3 1-2 pounds) of sugar—can be taken daily without producing diarrhea or increasing the quantity of urine, the amount of urea, the quantity of feces, or the nitrogen in the latter. The changes in the food were the same when the saccharin was taken as when it was not, and bad symptoms, such as headache, malaise, repugnance to food and vomiting, were absent. Neumann's conclusions, therefore, were, that saccharin is an absolutely harmless condiment, which, in the quantities likely to be used, can in no way injure the health.

In a recent number of *The Vaterland*, the statement is made that in the so-called "iron rations" allowed each soldier, for use only in case of necessity, a certain amount of saccharin is included as a sweetener. Caspari asks whether it is likely that the German government would equip its soldiers with a harmful product at the very time when they need wholesome food?

Doctor Caspari looks upon saccharin as a condiment, belonging to the same category as pepper, mustard, and spices, the purpose of which is, with incident specific stimulations, to improve the taste of food. It is not a food, and should not be used as a nutritive substitute for sugar. In the quantities likely to be employed, saccharin really is less likely to do harm than vinegar, common salt or sugar, all of which when ingested in large amount are known to be liable to produce in-

digestion, diarrhea, and even more serious disturbances of health.

DIABETES AND PYORRHEA

We find in the January number of *The Dental Cosmos* an excellent abstract of an article by Dr. Julian Zilz, originally published in the *Zahnärztliche Rundschau* for November 8, 1914. The author makes a study of 100 diabetics, belonging mostly to the working classes, who had received dental treatment in but few instances. It was found that 71 out of the 100 suffered from alveolar pyorrhea. In 47.8 percent of these, the pyorrhea preceded the diabetes; in 25.3, the pyorrhea appeared simultaneously with the diabetic symptoms; while in 9.8 it followed immediately after.

The author quotes Kranz as pointing out that the presence of pyorrhea alveolaris suggests disturbed carbohydrate metabolism, and he calls special attention to the value of the pyorrhea symptoms, as indicating the possibility of diabetes, in other words, as being a diagnostic sign worthy of serious investigation.

The investigations of Zilz immediately bring us back to Talbot's studies of the relation between hyperacidity (acidemia) and the etiology of pyorrhea. We all know the readiness with which diabetes is manifested by acid disturbances of various kinds. The importance of alkaline treatment, both for pyorrhea and for glycosuria, seems to receive further emphasis from these investigations; and this fact does not minimize in the slightest the importance of giving emetine treatment to every patient suffering from pyorrhea alveolaris.

MORE ABOUT EMETINE IN PYORRHEA

Some more very interesting clinical research-work on the use of emetine in the treatment of pyorrhea is reported by Evans and Middleton in *The Journal of the American Medical Association* (Jan. 30, 1915, p. 422). Of 70 pyorrhea cases in which the ameba was shown to be present, 54 were treated by injecting into the gingival pockets a 1-2-percent emetine-hydrochloride solution, and marked improvement followed in virtually every case. The period of treatment varied from four to twelve days, with an average of about seven. In a few instances, the patients complained of tenderness of the gums, but in the majority of them there was less pain

and less bleeding when the teeth were being brushed.

These gentlemen, in addition to the local treatment, also gave subcutaneous injections of emetine; but this course was not instituted until after the local injections had been given a trial for some days.

Usually, after an interval of from several days to a week following the last administration, as a precautionary measure the subcutaneous course of emetine treatment was instituted. Two plans of dosage were adopted: (1) a series of small doses of the alkaloid (1-8 grain) daily for eight days; (2) a shorter series of larger doses, 1-2 grain being given the first day, and then, after an interval of a day, 1-4 grain on two successive days.

In addition to this course, the authors advise periodic subcutaneous injections at monthly intervals, continued for several months, so as to prevent any proliferation of encysted amebæ. Five patients were treated with subcutaneous injections alone, and with good results.

The authors seem to object to the rather large doses (1-2 grain) suggested by Bass and Johns. The latter gentlemen, however, insist that large dosage has caused no systemic discomfort. Our own criticism of the smaller dosage advised by Evans and Middleton is, that, when a drug such as emetine is used for its amebicidal action, it is desirable that it be given in dosage large enough to secure saturation of the blood with the alkaloid. If emetine is well tolerated, the 1-2-grain dosage would seem to the writer to be preferable.

PYORRHEA AND ITS CONSTITUTIONAL SEQUELS

One of the most interesting points in the paper of Evans and Middleton just quoted is the study of the constitutional disturbances following interstitial gingivitis of amebic origin. They found that 52 of their 70 pyorrhea patients displayed constitutional symptoms of more or less marked degree.

These cases were divided into four groups: (1) arthritic, (2) neuritic, (3) digestive, (4) hemic, and (5) miscellaneous. The largest of these groups was the arthritic, which included 26 individuals, or 50 percent of the patients presenting constitutional symptoms. Of the others, 6 persons presented neuritic symptoms, 2 suffered from obscure digestive disorders, 6 exhibited various grades of ane-

mia, and the rest had miscellaneous complaints.

Especially interesting is the report of results following emetine treatment in the cases cited above. For instance, of 19 cases of arthritis treated with emetine, there was no apparent improvement in 4, unmistakable improvement in 12, while in 3 results were indifferent. The report of the cases of neuritis was unsatisfactory, because 5 out of the 6 could not be followed during their subsequent course. The single one who was followed did not show decided improvement. The 2 patients presenting digestive symptoms both were greatly improved following local treatment with emetine, still further improvement being noted in the one patient who received the emetine hydrochloride subcutaneously.

In 2 cases of pernicious anemia, the individuals could not be followed closely enough to determine results. A gain of up to 500,000 in the total number of red blood-cells was established in several cases of secondary anemia following the emetine treatment.

In other complications, good results were obtained. For instance, one case of obstinate headache responded quickly after relief of the pyorrhea with the emetine. In another case, splenic enlargement was decidedly reduced after treatment of a severe pyorrhea with emetine. A number of other interesting cases are reported by the authors, in which a greater or less degree of improvement followed medication of the kind described.

LOCAL REACTION FOLLOWING SUBCUTANEOUS INJECTION OF EMETINE

We have received from several of our readers reports that occasionally there is considerable reaction at the point of injection of emetine hydrochloride when administered subcutaneously. This may be explained by the experience of Evans and Middleton (*Jour. Amer. Med. Assn.*, Jan. 30, 1915, p. 422), whom we quote as follows:

"The question of local reaction on the subcutaneous injection of emetine hydrochloride in our cases has been most interesting. For instance, a case of arthritis whose pyorrhea has been cleared up by local treatment will show no reaction at the points of subcutaneous injection of two successive 1-2-grain doses of emetine. On the third or fourth dose of only 1-4 grain, a most marked local reaction, in the form of a wide, indurated areola of inflammation about the point of injection occurs. This local reaction

may be attended by a temporary exacerbation of the general symptoms, usually followed by a marked improvement.

"We have been led to think of this reaction as an index of a point of saturation, when, with the death of numerous amebæ, the strength of emetine in the blood having reached a lethal point, a great amount of bacterial and possibly amebic toxin is liberated. Of course, this explanation is tentative, and subsequent observations may rule it out; but, the alleviation of the general symptoms succeeding such an occurrence strongly supports this view."

EMETINE IN BRONCHITIS AND TUBERCULOSIS

Dr. James A. Raeburn has had an interesting experience with emetine hydrochloride, which he has employed in more than 40 cases of bronchitis and tuberculosis. His report appears in *The British Medical Journal* for March 28, 1914 (p. 703). Especially interesting is his experience with this drug in cases of simple bronchitis in which there is no evidence of tuberculous infection.

These cases, Doctor Raeburn declares, nearly always improve rapidly under emetine, provided there is no impairment of the heart's action. The expectoration disappears, and on auscultation moist sounds cease to be heard. This improvement is not transitory, but persists after the emetine injections are discontinued. Together with the improvement in the local condition, there is almost invariably improvement in the general state, the patients voluntarily stating that they have felt better since the emetine was taken.

Doctor Raeburn puts considerable emphasis upon the condition of the heart's action. If this is weak, he says that the bronchitis does not improve when this remedy is used. If there is such weakness, it must be remedied before the drug is resorted to.

Only in one instance was the emetine pushed to the point of nausea, this, however, passing away quickly as soon as the drug was withheld. No other undesirable effects have been observed.

One interesting case of bronchitis is cited, this occurring in a child of nine. Cough and expectoration (the latter being copious) had persisted for several months. No tubercle bacilli were found, and the von Pirquet test gave a negative reaction. During three weeks the injections of emetine were given twice weekly, and after the last injection the breath-

sounds were clear and the cough gone. No other remedy was administered.

In treating these cases, Doctor Raeburn uses rather small doses of the emetine, which he gives hypodermically. The contents of an ampule, containing 1-2 grain of emetine hydrochloride and 15 minims of distilled water, are diluted with 4 parts of sterile water. Of this dilution, 4 minims is given at a dose when the object is, to control expectoration or lessen congestion. This would be equivalent to 1-40 grain of emetine hydrochloride at a dose.

Doctor Raeburn is in agreement with Doctor Flandin in the opinion that emetine has a particularly powerful action upon congestive conditions of the lung, whether these be pretubercular or tubercular. He also reports his experience with cases of tuberculosis, in which emetine also was found quite effective, particularly in the earlier stages of the disease, before tubercle bacilli are found in the sputum.

EMETINE CONTROLS THE HEMORRHAGE FOLLOWING NASOPHARYNGEAL OPERATIONS

The first report of the use of emetine for controlling hemorrhage following nasopharyngeal operations is made by Dr. Joseph Weinstein, in *The Medical Record* for January 16, 1915 (p. 102). He reports 12 cases in which this alkaloid was successfully employed for this purpose, being given during and after operations upon the nose and throat. In each instance, 1-2 grain of emetine hydrochloride was given hypodermically. In only one case was the drug given prior to operation. This was for a tonsillectomy performed under local anesthesia. No hemorrhage followed. In the remainder of the cases the drug was injected after operation. Here are some of them:

One woman, who had bled profusely when operated upon for polypi several years previous, so that posterior packing was necessary for forty-eight hours, was operated upon at the present time for polypi and for disease of the ethmoid bone. In this instance, there was practically no hemorrhage.

Another woman gave a history of being a profuse bleeder. She was operated upon this time for chronic suppurative ethmoiditis, emetine being employed. As a result, there was practically no hemorrhage. The packing was removed after six hours, with slight oozing, which subsided in twenty minutes.

Another patient, a man, after a previous nasal operation, had bled continuously for five days. This time, after removing the posterior ends of the inferior turbinates, emetine was injected, and there was no bleeding.

In another case, following a tonsillectomy performed by another physician, severe hemorrhage came on within five hours. Every ordinary means had been employed to check it, without success. Bleeding stopped within ten minutes after one injection of emetine.

In still another case, there was capillary bleeding from the septum, extending over a year's time. It would stop at various times, but always recur within two or three days. Various treatment had been employed unsuccessfully. Emetine was injected three weeks prior to the report, and at the date of writing there had been no recurrence of hemorrhage.

These cases are typical of Doctor Weinstein's report. In only one instance was there a recurrence of hemorrhage after the injection. This was an operation upon the inferior turbinates. No bleeding followed, and the patient attended the theater the same evening. However, profuse bleeding occurred the next morning when the packing was removed. So, a second injection of emetine was given prior to repacking. Hemorrhage ceased in five minutes, and, hence, repacking was found unnecessary.

Doctor Weinstein says that he is not prepared to make the positive statement that emetine will control all such forms of hemorrhage, but his results have been so striking and so satisfactory that he is anxious that fellow workers in the field of rhinology and laryngology try out this remedy, which, if it is found efficacious under such circumstances, will be of inestimable value and benefit to mankind.

EMETINE USED IN FRANCE TO ARREST HEMORRHAGE FOLLOWING GUNSHOT WOUNDS OF THE CHEST

Emetine hydrochloride is certainly a wonderful remedy. It cures dysentery, cures pyorrhea, and it arrests hemorrhage—all kinds of hemorrhage, so it seems. In the preceding article we gave the experience of Doctor Weinstein, of New York, who is using this alkaloid to prevent and arrest hemorrhages following operations upon the throat. Since reading the preceding it has just come to our attention that emetine hydrochloride is

being used by French army surgeons to arrest the hemorrhage following gunshot wounds.

At a meeting of the Medical Society of the Hospitals (Société Médicale des Hôpitaux) Dupont and Troister gave their experience with this drug. Having observed that the ordinary methods of treating hemoptysis following wounds of the chest were of limited value, it occurred to them that the antihemorrhagic properties of emetine might prove useful in cases of this kind, being led to this conclusion by the knowledge of its remarkable efficiency in checking hemoptysis occurring during tuberculosis. Accordingly, in three soldiers suffering from penetrating gunshot wounds of the thorax, they made trial of subcutaneous injections of emetine hydrochloride. From the first, the hemostatic action of the remedy was manifested. The spitting of blood was arrested after one or two injections of .04 Gm. (2-3 grain) of this alkaloidal salt. Mery, who discussed the paper, stated that in case of hemothorax, following the injection of emetine he also observed rapid disappearance of the signs of anemia, of the fever, and even of the local signs.

WILL EMETINE CURE PSORIASIS

There are few diseases more common and more resistant to treatment than psoriasis; and, yet, as Pusey says in his work upon "The Principles and Practice of Dermatology," "concerning its essential cause we know nothing." About all there is to be said relative to its etiology is summed up by Stelwagon in the following words: "While it is true that the attacks [of psoriasis] often occur in those of visibly robust habit, yet a careful examination will usually disclose that this is more apparent than real; in such patients defective kidney elimination, gouty and rheumatic tendency, digestive disturbances, and in some not infrequently excessive indulgence in alcoholic stimulants are factors of importance."

In view of our ignorance of the cause and our inability to find a real cure for psoriasis, the announcement made by Dr. Wm. R. Chapin, a Savannah (Georgia) dentist, in the February (1915) number of *The Dental Cosmos*, is of peculiar and extreme interest. Doctor Chapin treated with emetine, applied orally, a case of psoriasis of 15 years' standing. The patient had taken treatment from numerous physicians without special benefit. There were patches on the backs of both hands, on both arms and upon other portions

of the body. The sufferer declared that he had taken every known remedy, with but very little if any benefit, and he had finally become so discouraged that he had given up all hope of ever being cured.

Then came Doctor Chaplin with the emetine treatment of pyorrhea. We will give Doctor Chaplin's further experience in his own words:

"In the treatment of his teeth for pyorrhea, I followed the course prescribed by the originators of the treatment already mentioned, and after the third treatment the patient voluntarily called my attention to the lack of itching and the apparent improvement in his skin disease, and voluntarily expressed a desire to have some of the emetine injected under the skin of the hand—indicating the benefit recognized, after the third treatment, by the patient himself. I did not comply with his request, but continued to treat the gums locally as before stated until the full course of treatment as prescribed was finished. At the present time, six treatments having been given—and it being now two weeks since the last treatment—every symptom of psoriasis has entirely disappeared."

The idea which will immediately occur to every reader of these lines undoubtedly is that psoriasis may prove to be a disease of amebic origin. No doubt research workers everywhere will be encouraged to study the disease anew with this thought in mind. No doubt, also, thousands of physicians who are called upon to treat psoriasis will see what can be accomplished with emetine hydrochloride. Probably best results could be secured by injecting it hypodermically in 1-2- to 1-grain doses. We hope that many readers of CLINICAL MEDICINE will feel impelled to give the remedy a trial in some of their cases. Since psoriasis is one of the most common of all skin diseases, there can be no lack of clinical material; and since the remedy is a harmless one, there should be no lack of patients to submit to the "cure."

POSITION INFLUENCING BRACHIAL NEURALGIA. TREATMENT

There are cases when the position of the head assumed at shaving arouses pain around the scapulohumeral juncture, and this, according to O. B. Meyer, of Wuerzburg (*Berl. Med. Woch.*, 1914, No. 36), may be of diagnostic significance. When this phenomenon proves refractory to treatment, and particularly if the pain is severe, radiograms of the

plexus involved and the cervical vertebrae should invariably be obtained, in order to discover any possible new-growth or displacement, which demand surgical intervention.

When a brachial neuralgia is acutely severe, injection-therapy should be considered, the injections being made paravertebrally or epidurally along the cervical column, or else near the peripheral nerves. The author also mentions algokratin (among the newer proprietaries) as having served excellently in this as well as other forms of neuralgia. "Algokratin de Lascosme" is a French specialty, and a writer in the *Muenchener Medizinische Wochenschrift* (1914, No. 37), asserts that it is composed of phenacetin, 50; pyramidon, 40; caffeine, 10; and that such a mixture yields exactly the same results.

PNEUMOCOCCIC FACIAL EDEMA

A peculiar case of edema of the face and labial mucosa has been reported by Doctor Weissbrem, of Hamburg (*Muench. Med. Woch.*, Sept. 15, 1914). The subject was an 84-year-old man sick with croupous pneumonia. The edema, of high grade, appeared on the third day. The blood of the patient was demonstrated to be sterile; however, the fluid of the edema contained pure culture of pneumococci. While positive diagnostic criteria of erysipelas were not in evidence, still, the appearance was sufficient to mark this as a case of real erysipelas, inasmuch as redness and sharp delimitation are not invariable features of this process; while pneumococcic erysipelas has been known to occur, although quite rarely.

A NEW ANTISEPTIC MERCURIC-CHLORIDE TABLET

In spite of the criticism to which it has been subjected, mercuric chloride (corrosive sublimate) is still the most popular of antiseptics for the treatment of wounds. Thomas Lissaman proposes (*Lancet*, Dec. 19, 1914, p. 1438) a new combination of this powerful remedy in a form which he believes to be superior to those heretofore in use. The formula which he employs is as follows:

Mercuric chloride.....	grs. 4.375
Calcium chloride.....	grs. 1.86
Sodium chloride.....	grs. 34.76
Potassium chloride.....	gr. 0.075

This combination is made up into a 40-grain tablet. This compound is very hygro-

scopic and must be kept dry. One tablet dissolved in a pint of cold water forms the ordinary antiseptic solution habitually employed by the author in treating wounds of the hands, feet, head and exposed parts generally. A weaker solution will serve for delicate skins.

The advantages claimed for this tablet are, first, that the mercuric chloride in this combination does not combine so firmly with the albumin as when used alone, as ordinarily employed, when it forms an albuminate of mercury, which renders it unsuitable and ineffective for the treatment of recent wounds. Furthermore, through the addition of calcium chloride, more rapid coagulation of the exudate from the wound takes place; such coagulum forming a tenacious clot, in which bacteria will not grow, while plugging the vessels and wound at once. Another advantage is, that it can be used with cold water, on account of its ready solubility. Yet another advantage, but to which Doctor Lissaman does not allude, is the fact that, when made into 40-grain tablets, the antiseptic hardly is likely to be swallowed accidentally, as when the tablets are of the ordinary size.

Doctor Lissaman describes as follows the method of utilizing these tablets:

"A man sustains a crushed hand at his work by being caught in a machine. His fingers are severely lacerated, he has compound fracture of several bones, tendons are exposed, and so on. No attempt whatever is made mechanically to cleanse the wound. Any obvious gross foreign bodies are removed; the hand is dipped for five minutes in the cold solution; the parts are very gently pressed into something like normal position; all active bleeding points are compressed with forcepses—no ligatures should be used. The whole of the injured area—that is, every particle of raw surface—is carefully covered with thin pure gutta-percha tissue. A small amount of wood-wool wadding is saturated with the solution and firmly pressed over the gutta-percha tissue. The whole of the injured part is then covered with an ordinary bandage; the object aimed at being, to put on the *minimum* of dressing. The bandage should not be tight, but it should be firm. Finally, the hand (bandage and all) is dipped into the solution. Tablets are given to the patient, one of which he is told to dissolve in a pint of cold water and to immerse the hand (dressing and all) at intervals of six hours.

"Such a dressing, blood-stained and dirty as it may become, can be kept on for three

or four days without any risk of infection of the wound. My practice when there is much oozing in a bad wound is, to change the dressing in twenty-four hours and to wash the whole injured area in the solution, then to deal with the wound according to its requirements—to suture the skin, to adjust broken bones, suture tendons, and so on.

"I never use a splint in such an injury, but I encourage the man to move his fingers from the beginning. No swelling will occur, no redness nor pain; but the skin which has been subjected to the action of the solution will be wrinkled, bleached, and soft, so that the cuticle can be easily removed together with all dirt and foreign matter on the hand. The coagulated blood clot should be disturbed as little as possible. The continued application for days or weeks of the solution does not injure the living tissues, and it is remarkable how rapidly the wound will heal under its influence. It is essential to keep the raw surface moist with the solution and covered with the gutta-percha tissue throughout the healing process."

EXPEDIENT IN THE OPERATIVE EX-TIRPATION OF VARICES

A simple helpful expedient in the surgical removal of small varicose veins is offered by R. Gutzeit; of Neidenburg (*Zent.-bl. f. Chir.*, 1914, No. 35). When operating, the smaller diseased veins frequently become indistinctly defined, particularly after the sterilizing application of iodine-solution to the locality. This difficulty Gutzeit overcomes by an ingenious trick. He cleanses the skin by rubbing it with cotton wet with alcohol, then he traces the diseased veins with an inky pencil (black) previously sterilized, and lastly paints the area with the iodine-solution. Result: the course of the veins is boldly-outlined upon the brownish underground.

MAGNESIUM IN THE TREATMENT OF TETANUS NEONATORUM

At a meeting of the Pediatric Society of Berlin, Doctor Falk spoke of his recent experiences with the treatment of tetanus of the newborn (*Muench. Med. Woch.*, July 28, 1914); which, however, he declared to be becoming so rare that he saw only 3 cases within the past four months. While, in general, prospects of a cure are very small, he said, he employed in these 3 cases hypodermic injections of magnesium sulphate in the man-

ner recommended by American physicians. Of the children in question, 1 still is under treatment, but the course nearly finished, while the other 2 recovered.

Speaking in general, Falk reminded his hearers that the first one to employ magnesium for this purpose was Doctor Meltzer. The action of this element is, to paralyze muscles and abolish sensibility; loss of consciousness and arrest of respiration may follow, eventuating in death. A lethal outcome, though, may be obviated by means of calcium chloride, hypodermically administered.

MAGNESIUM THERAPY SUCCESSFUL IN TETANUS OF ADULTS

Doctor Falk, in the address just instanced, also related his results in applying magnesium-therapy (particularizing 3 cases in grown persons). Here, the injections were made, some intraspinally, some subcutaneously, with no deaths following the latter method. The strength of the injections was, respectively, 5, 8, and 25 percent of the salt. In one case, in which the attack was mild, small amounts sufficed.

Magnesium (in the form of a soluble salt—sulphate) allays spasm; but this property is counteracted by calcium (introduced as a soluble salt—chloride). However, both these elements allay spasm in spasmophilia; presumably because the calcium acts upon the organism in some other manner. In the case of spasmophilia, the therapeutic attack must be directed centrally; while as to tetanus authorities do not agree. Meltzer recommends a combined narcosis with ether and magnesium sulphate, because the action is central. In states of depression, he assumes a disequilibrium between the magnesium and calcium in the system: he experimentally decalcified animals, whereupon small amounts of magnesium introduced yielded effects of the same intensity as normally would have required very much larger doses. A combination of magnesium with chloral, he surmises, might prove useful.

The speaker repeated the magnesium-sulphate injections only when the action was exhausted, as evidenced by recurring spasms; however, in the presence of high fever caution is enjoined, since then elimination is disturbed. Also, it is not advisable to inject magnesium sulphate in large doses in family practice; the speaker's own patients invariably having died under the circumstances, so that he has ceased to do so. In

the case of his children, he observed intestinal irritation after injections of the calcium salt; once skin necrosis occurred after the injection of a 25-percent magnesium-sulphate solution, but no such trouble followed the 10-percent solution; severe intestinal disorder was not observed, although two or three times a day mucous stools were voided.

The speaker enjoined care never to permit the child to grow hungry during this course, trying to give food every quarter hour. At the height of the magnesium action, the children do not drink well, possibly owing to a partial paralysis. If feeding is neglected, spasms set in. He did not look for any causative microbes.

Several members participated in the discussion, during which the following points were made, not all being in agreement: (Finkelstein:) Tetanus neonatorum (true) is an infective disease. The prognosis improves as the period of incubation is lengthened. His patients recovered without magnesium-therapy; when used, the time of cure was not shortened, but it does prevent the dangerous sudden accesses, while also improving the prognosis. The deaths occurred during an attack, even in the stage of improvement. Superinfection (pneumococci) and inanition must not be overlooked. That the disease is infective, is evidenced by its clinical identity with that of tetanus of adults, as well as its prevalence in the unhygienic tropics; however, not all cases thus diagnosed are real tetanus. (Czerny:) That tetanus neonatorum is not of zymotic nature, is demonstrated by the curative effects attained with treatments not directed against infection. It is an idiopathic disorder of some newborn children, consisting in an extreme tendency toward muscular jerking. The disease attacks infants in tropical countries even under modern régime, when the navel is aseptically managed. In the adult, the tetanus bacillus is readily demonstrated. (Baginsky:) He saw a case of infantile tetanus in which he isolated the Kitasato bacillus.

PERISTALTIN AFTER LAPAROTOMIES

Peristaltin, in the opinion of S. Flatau, of Nuernberg (*Monatssch. f. Geburtsh.*; cf. *Ther. Monatsh.*, 1914, p. 581), ought to be given (intramuscularly) after every abdominal operation; that is to say, twenty-four hours afterward. This sentiment is based upon the author's uniformly good results observed from this practice. In this, the author is

supported by Doctor Voigt, of Goettingen, who prepared the abstract for the *Monatshefte*; only, the latter injects, intragluteally, immediately after severe laparotomies.

Flatau first tried peristaltin in a series of 25 cases, alternately with patients not so treated. Then he administered it in 80 additional, consecutive cases. Almost uniformly peristalsis was stimulated, so as to expel the intestinal gases.

PARACELSUS A TRUE "MEDICINAE DOCTOR"

Much has been written as to whether Paracelsus, the famous scientist-quack, was regularly graduated from a medical school, and, thus, entitled to assume the degree of M. D. Now A. Burkhardt, of Basel, comes out with the assertion (*Korr. f. Schweiz. Aerzte*, 1914, No. 28) that a new document has been unearthed, showing that Paracelsus was graduated from the school of medicine of the university of Ferrara, Italy.

ANAPHYLACTIC SYMPTOMS FROM THIOSINAMIN

Occasionally there is reported a case in which a sudden febrile reaction occurs after a number of injections of thiosinamin have been given. These occurrences may be referred (after excluding disease-phenomena and possibility of an impure preparation) to one of three causes—idiosyncrasy, the opening of an encapsulated tuberculous nidus, and anaphylaxis. One instance of the latter kind has been previously reported by Mendel, and to this Dethleffsen, of St. Georg Hospital of Hamburg (*Ther. d. Gegenw.*, Dec., 1913), adds another.

This latter case concerns a woman of 64 years who has been afflicted with cholelithiasis that resulted in peritonitis and subsequent painful adhesions. In 1909, fibrolysin treatment was instituted, but after the tenth injection fever and an intense measles-like exanthem broke out, so that the course was interrupted. While there was a slight amelioration of the adhesion-pains, thiosinamin again was resorted to in 1912. This time, after the third injection, the patient was taken sick suddenly with severe dyspnea and anxiety, and when three days later another dose was administered she also had a chill and her temperature rose to 39° C. (102° F.). These symptoms having com-

pletely subsided, an intragluteal injection again was made seven days later, and again there followed suddenly severe dyspnea, chill, and sense of anxiety, with a temperature of 38° C.; later, vomiting occurred. None of these phenomena persisted for more than two days. As to the adhesion-pains, the patient felt relieved of them.

The author carefully excludes all other possible causes of these accesses, leaving only the supposition of an anaphylactic state consequent upon the destruction of autogenous albuminoids; as demonstrated, for instance, by Stuermer, according to whom specific antibodies are generated upon the breakdown of autogenous albumins, which are capable of giving rise to intensely toxic combinations.

As to the fact that anaphylaxis causes falling of temperature (Rostoki), Friedberger and Leschke are cited to show that the presence of relatively large amounts of anaphylactic poison cause death, that less than lethal proportions reduce the temperature, but still smaller percentages give rise to elevation of temperature.

PHARMACODYNAMIC INFLUENCE UPON THE OPSONIC INDEX

Some preliminary data upon the influence of drugs exerted upon the opsonic index, as published by A. Strubell, of Dresden (in the *Med. Klinik*), are of a certain amount of interest even in their incomplete state.

These investigations seem to show that the presence in the system of iodides of alkalis, iodglidin, alkali bromides, bromglidin, adrenalin, pituitrin, and thyroidin depress the opsonic index in a like manner as does an injection of killed staphylococci, with a parallel subsequent positive phase. On the other hand, after the ingestion of arsenicals and of pankreone the opsonic index rises very decidedly, to be followed by the negative phase.

BENZOL IN POLYCYTHEMIA

The fundamental investigations by Selling, upon the influence of benzol upon the blood-cells, were suggested by the repeated observation that aplastic anemia follows after poisoning with that substance. Basing upon these facts, Koranyi introduced the now quite largely adopted benzol treatment for leukemia.

Since, however, benzol also destroys the red corpuscles, Kiralyfi has tried the same

therapy for polycythemia; and he now warmly recommends (*Virch. Arch.*, Bd. 213, H. 2 and 3) this measure to his colleagues, although he has used it in only two instances. However, the medication must be persisted in for some time. Strangely, the leukocytes are not affected under the circumstances.

One of the two patients treated was afflicted with severe nosebleed, going on three years, and suffered from dizziness and congestions of the head; his face was abnormally florid. He received 1 dram of benzol a day; but, being unable to bear it by the stomach, it was then administered rectally.

The other was a man of 49 years, showing that marked suffusion of the skin and mucosas, and troubled with headaches, congestion, dizziness, and other symptoms, but whose spleen was not involved. Placed on benzol, 75 grains per day, the polyglobulia rapidly diminished and with it the characteristic discoloration of polycythemia, as well as all the subjective symptoms. At the start, the blood-count showed 8,700,000 erythrocytes, but their number was at normal after three and one-half months' medication.

INTERMEDIARY CONVULSIONS

In an address delivered before the Pediatric Society of Munich, Doctor Husler (*Muench. Med. Woch.*, 1914, No. 38) discussed the so-called intermediary convulsions, by which, according to Oppenheim, are understood those forms of functional convulsions which do not bear the exact character either of epilepsy or of hysteria; but, declared this speaker, this conception must be taken very broadly, owing to the peculiarity of the infantile organism in the presence of a given endogen determination, so readily to respond to pathogenic irritation, with convulsions, loss of consciousness, and allied phenomena. And in this collective group must be included one syndrome that is characterized by a combination of the lordose symptom-complex with convulsive conditions of various kinds.

And this is not a mere casual association of the symptoms, but rests upon an intimate connection. Epilepsy can be excluded, owing to a complete absence of stigmata of degeneracy, bad heredity, and psychic defects; also, there are neither physical nor mental indications pointing to hysteria. Those subjects are mostly boys at school-age and puberty. Neuropathies and hereditary defectiveness almost always are absent. The subjects invariably are individuals inclined to vaso-

motor instability and subject to convulsions and occasional loss of consciousness. The seizure occurs at intervals of weeks or even months, following standing work, occasionally after emotional strain, but also without any recognized cause. No therapeutic measures are known that help; bromides and arsenic are without effect. Prognosis seemingly is favorable.

INFLUENCE OF ENDOCRINE-GLAND EXTRACT UPON RACHITIC INFANTS

In an address delivered before the Berlin Society for Internal Medicine, R. Bieling told of his observations (*Muench. Med. Woch.*, No. 20, p. 1148) upon the action of extracts of various ductless glands upon the bone growth of rachitic infants; the organs employed (the extracts, subcutaneously) being the anterior lobe of the hypophysis, the parathyroid bodies, and the thymus.

Sheep thyroid extract established a balance between calcium and phosphorus, both elements being retained; but, this improvement disappeared after cessation of the injections.

Calf thymus extract did not influence the retention of the two elements named.

Heifer hypophysis extract was followed by diminished retention of calcium, with no effect upon the phosphorus metabolism.

Deduction: The parathyroid bodies are of importance with regard to calcium metabolism. Time enough had not passed to judge of any possible clinical value of such medication.

In the discussion following the address, Oswald Meyer said he had cured a child of spasmophilia by means of parathyroidin. Also the substance had given good clinical results in severe rickets; it also had influenced calcium elimination beneficially. However, it was pointed out that Weichselbaum had encountered hypertrophy of the parathyroid bodies in a rachitic child, so that caution was indicated in administering these glands. As to these epithelial bodies, the discussion brought out, nothing definite is as yet known about the eventual outcome from transplantation from other sources, animal or human.

SCOLIOSIS, AND DISEASED HYPOPHYSIS

The same idea of relationship between the pituitary gland and bone growth set forth in the foregoing we find expressed by another

clinician, Dr. A. Schantz, of Dresden, in a talk at a meeting of the Dresden Society of Therapeutics and Physiology (*loc. cit.*, p. 1149). The real reason for the defective ossification of the vertebræ still is a problem, this speaker said; however, he had been struck by the frequent association of scoliosis and struma, or, strangely, on the other hand, a seeming complete absence of the thyroid gland in some scoliotic subjects.

The role of the endocrine glands being the topic at the time, the speaker gave voice to the impression gained that there must subsist some causal connection between the two conditions named. Accordingly several years ago he began to feed thyroid gland to persons affected with rachitic curvature of the spine; but, the results were, as he puts it, curious. Some of the patients were favorably influenced; others, though, proved extremely sensitive to even minute amounts, quickly exhibiting thyreotoxic phenomena, so that he abandoned the idea.

Then, some months ago, the speaker's attention was directed to reports demonstrating how disturbances of the pituitary gland affect skeletal development. Immediately Schantz began to administer hypophysial extract in his cases of scoliosis and related conditions, and he feels assured that a large proportion of the subjects [Number not stated.—Ed.] is being favorably influenced. Thus far no untoward effects have been observed. He feels justified in recommending this therapy for trial in all cases of what he has termed *insufficiencia vertebræ*, a condition characterized by pain, without any specific disease being ascertainable.

GOITER AND DRINKING WATER

Apropos of the subject of goiter, at the same meeting above referred to, Doctor Lindner, of Dresden, touched upon the theory of the water-born nature of this disease of the thyroid gland. He joins the growing number of observers—Dietle, Hirschfeld, Kutschera, for instance—who doubt or even deny that minerals in drinking-water have to do with its causation, believing it, rather, to be conveyed by some virus. He pointed out particularly how in large cities having an excellent water supply, preeminently Berlin and Dresden, the malady is prevalent and spreading (particularly so in their own Dresden); while even as a student in Berlin, his attention had been attracted by the large number of goitrous persons in that city.

Another member, L. Meyer, following Lindner, stated that goiter occurred quite frequently also in Wuertemberg, his home; adding the interesting fact that the number of goitrous dogs there was rapidly increasing, and he was wondering why this phenomenon was not accorded more attention. In addition, he also reported having completely cured one patient of a severe exophthalmic goiter by means of milk from a thyroidectomized goat.

Specifically, the first series of results occurred in a house in which every one of the 5 members of the family was free from any struma. Then, for the sake of comparison, another house was selected, in which the children were distinctly goitrous. But, mark, all the members of this family were using only the Jura-water (nonstrumogenous, so called), and the experimental rats (imported) received the same. After young ones were born, and these had become old enough, the children were allowed to play with them. (All rats were kept in cages, of course.) After the lapse of seven and one-half months, all but one of the 5 imported rats were goitrous, and, of the 4 born there, 3 were affected. This would seem to exclude the new (Jura) water at this locality.

HYPERACIDITY AND HYPERTHYREOIDISM

In consequence of the study of a series of cases in which gastric disturbances and functional alteration of the thyroid gland were associated, G. Marañon, of Madrid, has become convinced (*Rev. d. Med.*, Mar., 1914) that at least one group of disturbances of the stomach is connected with faulty action of one or other of the endocrine, or ductless, glands.

Thus, Marañon finds that gastric hyperacidity is so frequently a concomitant of enlarged thyroid gland that it constitutes only one more indication for energetic interference. Thyroidectomy here is the more promising; however, medicinally, atropine—or one of its congeners—by virtue of its vagoparalyzant action, often will yield excellent results.

Consequently, whenever one is dealing with excessive secretion or acidity of the stomach, palpably of a nervous character and unamenable to treatment, it is advisable to inquire as to the possible presence of vagotonia, besides enlargement of the thyroid gland, which happily may solve the question of etiology and proper treatment.

Miscellaneous Articles

One Day Out of a Doctor's Life: The Battle For Life

DECEMBER 5. Afternoon. The first snow-fall of the season. It began about two hours ago, a soft, feathery downfall, shutting out the distant shore-line, hiding Warren's Island behind a white pall, covering the tall old pines until they stand spires of driven whiteness. The streets are deserted, not a sound breaks the stillness save the crackle of the wood fire in the little stove just behind me and the musical ticking of my neighbor's clock next door.

As I gaze out of the window, I wonder how some of my college mates now enjoying lucrative city practices would like to exchange places with me. I should not care for the swap, myself. I would not exchange my sleepy little mountain village perched above the lake for their grind and rattle and roar of passing trolley cars and hurrying traffic. I would not trade my little two-room office with its meager furnishing and scanty store of books for their palatial suites equipped with all that heart can desire. I presume that good God created each man for his place in life, and I should be very, very lonely in a large city away from the old lake and the lofty pines, just as they, perhaps, would pine for the smell of coal smoke and the glare of electric lights. Then, too, how would they minister to the call of suffering if such ministration called for a trip such as I shall have to tell you about?

Just two weeks ago today, a chill north-east wind was sweeping down the broad expanse of lake, chopping the lead-colored water into short nasty waves, each wave tipped with foam. Already darkness had begun to settle over the water when a messenger came. The mail steamer had brought him, but there was no returning mail steamer to fetch us both to the bed of suffering seven miles across the disturbed lake.

Duty here in the West knows no law of convenience. If there is no way, you must find a way. In ten minutes I had run the "Pa-

poose" out of her moorings and we were scudding across the darkening water in the teeth of the gale. The "Papoose" is a staunch little craft, what though she is made of thin boards and canvass. Away off on the further shore a single light beamed, and for that we steered, the little boat bobbing like a cork on the waves. A buggy awaited our coming, and then three miles through the darkness back from the lake shore. Three miles through the dense pines and firs, so dense that not a glimpse of sky shone through their dark green foliage. The call, then back to the lake shore and the waiting "Papoose."

Dark. So dark that the white hull of the little boat was a mere smudge on the black, black water. Off on the shore from whence I had come glimmered a few feeble lights, the lights of the little village where I have my home. So dense was the blackness that the eye refused to penetrate it ten feet in front of the boat. I cranked the motor, called goodnight to the companion who carried me back to my boat, and started on my home-trip. I had landed in a deep shallow bay, and within five minutes from the time I started on the return I felt the launch strike something on the bottom and grate along the rocks. Then the motor stopped. I pushed the boat off, picked up the distant lights and started once more. The wind by this time was blowing a gale and the waves were tossing the fragile little craft like a toy-boat.

Twenty minutes from shore, and the thought struck me: What if, in running ashore in the darkness, I had stove a hole through the thin boards and canvass? Great heavens! There I was, in the middle of a 7-mile stretch of wild water, with nothing but an oar for a life-preserver.

I tore up the covering to the well and plunged my hand into the bilge. The water splashed up and covered my hand. I found the bottom of the boat and held my hand there, fingers extended, and felt the water creep

slowly up my wrist. The boat was filling. Not rapidly, yet, still, with enough rapidity to swamp the boat before I could reach the shore.

I am not especially a coward; nevertheless, for all that, a thrill of terror ran through me as I realized that my boat was sinking. In emergencies of this kind, a man thinks quickly. I knew it was impossible to find the leak in the darkness, but even if I did, there was nothing wherewith to stop it.

Half-way home lay an island something like half a mile in length. I knew I must be within two or three miles of that island; but, how to find it in the dark was the problem. I knew that the boat probably would hold out until I made the island, if I did not miss it in the dark. There was no other alternative, I simply *must* find that island. With one hand still testing the rising water, I veered the boat to the right with the other. Heavens, how the minutes dragged away! Had I missed the island? I began to despair.

Then another thought. I could still see the faint glimmer of the lights at home. The island lay between me and my destination. If I veered far enough to the right, the island would shut off the lights. I swung still further to the right and soon the lights were shut off. Now if I could hold my course I was sure to make a landing.

By this time the water stood above the floor and shortly would reach the motor, when all would be over. I stood up and threw off my heavy Mackinaw jacket, removed my shoes and prepared to swim for it. Soon rising water reached the motor and it died with a gurgling sound. The impetus of the boat carried it forward for several yards, when I felt the keel grate on the shore. I'm not much on the pray, but I'm afraid I breathed a silent prayer of thanks when I felt the boat run on the beach.

Still, being marooned on an uninhabited island on a cold night and wet to the skin was not the most pleasant experience one could wish for, after all. I waded ashore, pulled the boat up as far as possible and began a prospecting tour. Fortunately I found some matches and equally fortunate I was to locate a pitch-pine log that had been stranded there by the high water. In a short time I had a fire going. With a roaring fire and a pipe, I could manage until morning.

All night the wind howled and the waves tore upon the beach, lashing themselves into foam where they struck. Out of pure, unadulterated perversity, the morning delayed coming for hours after it was due; still all

things must have an end, and gradually it grew gray in the East, the blackness faded and the dim outlines of the distant shore came creeping through the mist.

The light waxed and it was day. I hauled the "Papoose" up on land as far as I could and sought out the injury. It was a hole just at the water-line, and this I succeeded in making nearly watertight, then I baled out the boat with my hat and cuddled the drowned motor into renewed life. As I rounded the south end of the island, I made out several launches patrolling the lake, looking for a wrecked motor boat.

That's just one of innumerable experiences a country doctor in the far West must go through if he tries to do his duty toward his people.

CHAS. S. MOODY.

Hope, Ida.

FROM THE FIRING-LINE

Several questions come to the surgeons of the receiving hospitals on the front, and even on the firing-line. One of them is this: Shall we give morphine—hypodermically—where there is evidently pain and rapidly approaching shock, or hemorrhage, or a wound that involves the large nerve-trunks? In most instances, the soldier is dazed and shocked, to the extent that he does not feel the acute pain. In others, though, there is agony, not only as reflected in the countenance, but by the mutterings and low exclamations. If the wounds are in the lower extremities, there may be profuse perspiration, profound anemia, and general palsey.

Among the French surgeons, morphine is given in all cases of severe wounds, usually in quarter-grain doses. They are provided with a bottle containing it in solution, together with a hyperdermic needle, so that an injection requires only a few seconds. The results are said to be very satisfactory. Back at the field hospital, after the wounds have been dressed, and the question of transportation is considered, the surgeon's judgment about the necessity of morphine is exercised.

It is the experience of the most practical men that morphine is the best and most readily available remedy that can be used in the majority of cases. Coffee and soup are the next best means available. These latter are found to be very grateful to the wounded, and sometimes they even have a decided soporific effect. Men who have been chilled in the trenches for a long period and then

wounded seem to display a very big appetite at the receiving hospital, and when this is partially gratified they fall into a sleep.

What becomes of them in the hospitals in the rear is not clear, but evidently they are no worse for the morphine, coffee, and soup treatment. Another fact is very evident to the surgeon, namely, that after the soup-kitchen has made the rounds of the trenches and each one is given hot soup, coffee, and bread, the men are more reliable and accurate in their fighting-abilities. An incident may show this.

The announcement was made by an airman that a large number of German troops were seen at one point getting ready for a charge. This was early in the afternoon. Instantly the soup-kitchen was sent down along the lines, while on an elevation just back of the line several magazine guns were being concealed. Orders were given that the men in the trenches, as soon as the charging columns of the enemy appeared, were to fire vigorously and then fall back to the right and left, and leave it to the magazine-gun men to continue the conflict. This no doubt was carried out.

A furious charge was made at about 8 or 9 o'clock in the evening and evidently the enemy was forced to retire. All we knew about it on the firing-line was the stream of wounded we saw coming in until daylight and even after. The enemy seemed to get the range of where these magazine guns were stationed and soon after daylight began a furious bombardment along that region. This was considered an intimation that another charge would be made very soon and magazine-guns were brought up on different sides. The lines were reestablished, the kitchen supply-wagon went down along the trenches, and the stretcher-bearers, at great peril, picked up all the wounded they could find. It was found that a great many of these were Germans suffering from gunshot wounds from our magazine-guns. As a rule, they rather welcome being taken prisoners and do all they can to get back to the rear, with a kind of grim satisfaction and feeling that their part is over. The number of wounded at this point was very large and motor ambulances came from all directions, so as to clear up the hospital and provide for another tide of men.

All day long the artillery fire at this point was very severe. It was evident there would be another charge to break through the lines at this point in the night. Magazine-guns were mounted here and there, and concealed, at points where the enemy would probably come on. A large number of Red Cross men

and ambulances gathered at the receiving hospital; and, sure enough, as expected, by about 10 o'clock or later a furious fire began at this point. This kept up for twenty minutes or longer, then subsided, and an hour later another charge was made. In the meantime, other magazine-guns were hurried to the place. Although the night was dark and rainy, the enemy once more made a furious attempt to break our lines. For nearly an hour this time the roar of the guns was frightful, then they subsided.

Then, finally, the stream of wounded began to come in, and another hospital was established. For eighteen or twenty hours a steady stream of wounded men came pouring in, were treated, then sent back to the rear. This was one of the most serious engagements the results of which I saw. The number who passed through the hospital reached nearly a thousand in two days. Those who went out on the battle-field describe the number of dead as something far beyond anything that ever was seen before. No attempts were made to bury them for several days after. It was evident that the wounded on the other side were equally large, and the attention of the troops was turned to get them off to the rear before making another attack.

Two days later the second hospital was moved several miles north, and probably the same scenes were enacted there, where other charges were made. The enemy determined to break the lines somewhere and to establish new positions on a ridge of hills, several miles to the rear. Of course, all the farm-houses, barns, and sheds in the neighborhood were utilized in every possible way for protection, but, fortunately, the commissary department was able to bring up a great stock of stores, such as blankets, coats, and comfortable things, and thus provided in some measure for the severe, inclement weather. Surgeons and Red Cross dressers had to make the best of every accommodation and hover around the fires in antique stoves or fireplaces to keep warm. Work on the firing-line, while full of constant excitement and deprivations of sleep and rest, soon becomes very dreary, and there is a pressure to be assigned to the rear. This brings up new men; some of them very incompetent and occasionally a man utterly unfit to do any independent work. After a day or two of irritating, exciting work and sharp reprimands from the superiors, he goes to the rear. Most of the physicians are Red Cross men. Occasionally we see a regularly appointed English surgeon, but after a little experience these ask to be sent to the rear.

The superior officers are blamed for bad work on the front, for failure to ligate arteries properly or to adjust broken bones; and, when a patient, after being received several miles in the rear, dies soon after from hemorrhage, or he has a very severe wound, made so by transportation and imperfect care at the front, a note is made of this fact, and the supervising surgeon is supposed to look into the matter and determine who is at fault. This requires constant supervision, and, when a new man is watched for a while and found to be efficient and to exercise reasonable care, he is trusted.

In the receiving hospital, the work is supervised by experienced men, and very few mistakes are made. Occasionally, a fault of judgement occurs in sending back to the hospital men who die on the way. This causes great inconvenience and seems to reflect on the judgment of the superior. In the hurry and confusion at the front there is a great deal of good work done and good judgment exercised concerning the best treatment for the time and place.

An incident showing the humanity of the officers as well as of the surgeon took place in a little village where there was a brewery with two large tanks. A quantity of coal had been piled in the furnace, and the commanding officer, with the counsel of the surgeon, heated the water in these tanks and started a bathing establishment. This was highly appreciated and largely patronized. Men from the trenches and in the near neighborhood were detailed, and they jumped into the tubs, four or five at a time, and took advantage of the first opportunity they had had for a good warm bath. A physician took charge of this, and for a day or more a genuine luxury was afforded the poor fellows. Then came a change of location.

Another incident was that of a sudden call one early morning to move the receiving hospital a mile or more farther north. Fortunately the night before nearly all the transportable cases had been sent away and only those who were likely to die at any time remained. A couple of hours of very intense work with a line of ambulances, and a new hospital was established in a little cluster of houses near the edge of the woods. While the telephone wire was being adjusted, I went back to find a motor to carry the boards to our new station.

A few hundred yards away from where the hospital had been removed, I saw a company of artillerymen mounting one of the largest guns in service and bringing up ammunition

and fastening trees around, so as to obscure the location of the guns. It was evident that a new artillery duel was to begin at this point, and of course the field hospital was in great danger.

Within a few hours after the guns began, shots from the enemy would fall in the vicinity and, if the sky cleared away and the airmen could detect the location of the guns, it would be a dangerous place. While watching the mounting of the gun, a feeble, excited-looking man came along and inquired about the location of the trenches. He announced that he was a newspaper man and had come up from the rear and wanted to see the work done in the trenches.

The officer advised him to keep away, saying that the ground sloping down to the trenches was covered by German sharpshooters and no one dared to expose himself in that neighborhood, but, if he would wait until night and then go around with a kitchen-motor, he could see what was going on. The man evidently was not satisfied and declared that he had been on the line before and knew what he wanted. The officer remarked to me, "That fellow will get killed before night." Soon the big guns began to roar, sending a great shot every five or ten minutes. I observed that no one remained around the gun except those who had business. Everybody seemed to go off some little distance. After a couple of hours, return shots began to fall. One of them struck the location where the receiving hospital stood in the morning, tearing up great masses of earth as it exploded. Late in the afternoon, the enemy made a charge at this point, but were repulsed. Among the wounded that were brought back on a stretcher was this same newspaper man. He was practically paralyzed all over and unconscious. Later, when the more acutely wounded were looked after, a careful examination showed that there was no injury whatever on his body, he simply was paralyzed and comatose. The pulse was beating with more or less regularity and the pupils were immensely contracted. The diagnosis of shock was made and the man was put into a motor and sent to the rear. From inquiry it was learned he had been near where a shell had exploded in a very exposed position. This was one of a few cases that are seen of what, for lack of a better name, is termed shock. Something would happen and the motor centers had become paralyzed. What became of him no one knew, but this was an example of reckless exposure which no one with experience would dare to risk.

This was the first newspaper man I had seen. Occasionally some sight-seer will wander about the hospital, but the grewsome sights and chilly reception that is given drives him away. Men who apparently are taking notes and writing are quite willing to keep well in the rear and take the statements of others, rather than try to verify them, themselves. Men in the trenches are alert to shoot at someone on the other side and those of the enemy do the same thing. Sometimes the trenches are surrounded by open fields, and these afford a good opportunity for persons going and coming to get into the danger zone. I saw at one place at least five or six bodies of soldiers and others who had been shot on the open field inside the trenches, toward the rear. They had been allowed to lie there, because of the danger of moving the bodies, and only at night could they be taken away. As they were dead they attracted little attention.

The cloudy weather seriously affects the fire on the front. Whenever the sun comes out and it becomes clear, the airmen on both sides are seen marking out boundaries and taking observations for the big guns and estimating the force at different points. Fortunately the sky has been cloudy for many weeks, consequently very much less accuracy has followed the artillery fires and the charges to break up the lines at different points. Evidently both the English and the French are bringing into service much larger guns and attaining a degree of accuracy in their firing, as shown by the cessation of the Germans' guns every now and then.

Considering the magnitude of the battlefield and the furious charges on both sides, it is the opinion of those best able to judge that the fatalities are very much less than would be expected. It is also evident that the number of persons going through the receiving hospitals, who have contracted fevers, rheumatism and other disorders, is increasing.

"BRITON."

WILL EMETINE CURE PELLAGRA?

During the last eighteen months I have been called upon to treat three cases of pellagra. The first of these victims came under my care at a time when I was using emetine hydrochloride with wonderful success in the treatment of amebic dysentery. Inasmuch as the intestinal symptoms were of a somewhat similar character, I decided to give emetine a trial in this instance; and since then I have given it in two other cases of pellagra.

Following the emetine treatment, the symptoms in all three abated, the skin cleared up and the condition continued to improve, until now no distinguishing signs of the disease remain except a slight scaling where the skin had peeled off, especially where it was of two or three years' standing. In every one of them, the intense nervousness would subside within less than ten days after starting with the emetine. While I do not consider these patients entirely well, the improvement is very decided.

I would very much like to learn whether any other reader of CLINICAL MEDICINE has tried emetine in pellagra, and, if so, with what success.

Grannis, Ark.

A. D. HILTON.

[One other physician has written me that he intended to give emetine a trial in some of his pellagra patients. I think this was our friend Dr. A. L. Nason, of Maben, Mississippi. I wish to inquire whether any other reader of our journal has tried the remedy in such cases. If he has, we hope that he will report promptly.—ED.]

THAT FINE MOLASSES: WRITE DOCTOR NASON

Dr. A. L. Nason, of Maben, Mississippi, writes us that he has been flooded with inquiries concerning the molasses referred to in our January issue. That's fine!

For your own sake, we want to repeat the suggestion that any doctor who wants to get some real, genuine cane-syrup of the delicious molasses kind, can do no better than to write to Doctor Nason himself. He will fill your order, and we can assure you that the price will be right.

MAGNESIA IN OXALIC-ACID AND OPIUM POISONING

On November 8 last, I was called to attend a woman, 28 years old, who, in a fit of despondency, had swallowed 1 ounce of tincture of opium and 3 ounces of oxalic acid. However, immediately after taking the draught, she regretted her action and told what she had done. Reaching the bedside within five minutes after being notified, I lost not a moment in introducing into the stomach a tube and poured in half a pint of milk of magnesia, which I always keep on hand for emergencies.

While waiting for the magnesia to act upon the acid, I examined the patient more closely and I found her in a semiconscious state, with knees flexed toward the chest, and suffering severe abdominal pain; in fact, there was extreme tenderness over the entire abdomen. Just before I arrived she had had a violent attack of retching and vomiting. The vomitus smelled offensively sour and was somewhat blood-streaked.

After the expiration of four minutes I withdrew the contents of the stomach, which were markedly acid in reaction. So I poured in another half pint of the hydrated magnesia, which, when withdrawn after waiting five minutes, now was distinctly alkaline. I then lavaged once more, this time with equal parts of the milk of magnesia and warm water.

In the meantime, the patient had regained a fair degree of consciousness. She had a small but readily perceptible pulse of 62, with a very slow apex beat. Her temperature was normal. She was slightly cyanosed, complained of severe headache, and later became somewhat dyspneic; the latter symptom causing considerable distress and much fear and apprehension that, after all, our efforts might prove futile. However, this dyspnea passed away after a short interval, and with it all apprehension.

I continued the treatment with the milk of magnesia, giving two tablespoonfuls every half hour for four doses, then every two hours. I elevated the foot of the bed, which was warmed with hot-water bottles, and gave a hyperdermic injection of ether. I also gave a high enema of the hydrate of magnesia, and encouraged the free use of water, at body-temperature, by Murphy's drop-method. The patient had frequent recurrences of attacks of vomiting; in fact, the gastrointestinal irritation was most severe during her entire ordeal.

On the following day, November 9, I found the patient fairly well, with a pulse of 70, and temperature at 98.2° F, and no more cyanosis. She had a swollen, edematous tongue, curiously streaked with white. She still complained of abdominal pain, but she had good free bowel movements, owing, most probably, to the magnesia. I continued the same treatment. On November 10, the pulse and temperature were normal, but there still remained perceptible tenderness over the abdomen and some slight pain in the lower extremities. By November 12, the patient was able to sit up, but was still quite weak. I left her on a liquid diet, and continued the magnesia—a tablespoonful every four hours for the three days

following. On November 15, I found her entirely recovered from her experience and heartily glad and effusively thankful that she would be permitted to try and regain some measure of health and strength, and the ebullient spirits that should be a part of a young woman's rightful heritage.

Because treatment had begun before much absorption had taken place and there had been such free emptying of the stomach, I deemed it unnecessary to attempt counteracting the opium; indeed, throughout the course of the treatment, there did not seem to be any symptoms distinctly referable to that narcotic.

This experience is very instructive and significant, for several reasons. First, remembering that the therapeutic dose of oxalic acid is from 1-2 to 1 grain and that it is soluble in three parts of water, manifestly this woman must have taken about 180 times the maximum therapeutic dose.

Furthermore, we are warned that, even though vomiting be encouraged and the stomach-tube be used immediately, unless the antidote is at hand, death almost invariably follows oxalic poisoning. And it must not be forgotten that the *soluble* salts of oxalic acid (as the potassium and the ammonium oxalate) are quite as poisonous as is oxalic acid itself.

The antidotal indications call for the alkaline earths, either lime or magnesia, as they unite with the oxalic acid, to form the insoluble, inert compounds, calcium oxalate and magnesium oxalate, respectively. I was led to choose the hydrated magnesia, as it is readily administered and has a much higher neutralizing power than limewater—the logical method of administering lime.

While this was a most exciting experience, I should have no fear of a disastrous termination in these cases if two favorable factors were presented: first, if I were called in time; second, if the antidote, milk of magnesia, were immediately available.

JULIUS CHAS. ROTTER.

St. Louis, Mo.

[May we emphasize the point made by Doctor Rotter—a point often overlooked—that oxalic acid is *the one* caustic fluid in which great care must be exercised in selecting the antidotal alkali. Potash and soda, either carbonate or hydrate, must not be used, since they make poisonous combinations. The proper base is either calcium or magnesium. Use the one you can get quickest—magnesia, carbonate of magnesia, chalk, whiting, powdered lime-stone or marble,

or quicklime much diluted; besides those named by the doctor. It's a good thing to have something handy.—ED.]

MORE POETRY BY THE FAMILY

Not infrequently some of the readers of CLINICAL MEDICINE feel the poetic urge throbbing so strongly in their "innards" that they just have to yield to the impulse, and write. Result: A crop of verse. This month we print several contributions from members of the family—good stuff, too, we call it. If others feel inspired, we shall be glad to have them submit samples of their work.

THE DOCTOR

By HARRIETT A. BLACKMER

No higher, holier gift than thine,
To mortal frail, is given,
To heal the ills of fallen man,
A gift of highest heaven.

And He who taught the healer's art,
When footsore, lone, and weary,
Shall guide thy hand, direct thy heart,
In byways dark and dreary.

And shouldst thy gift by sin be sought,
To desecrate God's work so fair,
May lustrous gold to thee be naught,
God keep thee from the tempter's snare.
Newport Beach, Cal.

THE SKULL

By JAMES A. DEMOSS, M. D.

Here, here is where the human soul indwells,
The home of manhood and the place of thought;
Reason constructs her themes, and mem'ry tells
Visions the subtle inner mind hath wrought.

This is the dome of that vast temple grand,
The house God builded in His image true;
Who Wisdom caused persistently to stand,
Safeguarding portals wrong could enter through.

Concealed within this spacious vault are powers
Of mind and soul; the chosen dwelling-place
Of love—that strength which character endowers;
The habitation of all mental grace.

Here, too, the Builder constantly abides,
Who planned and wrought, constructed and designed
The Palace Beautiful. No house besides
So worthy is, to God to be assigned.

Thought's home, indeed! So godly is the sway
And reach of human thought this mould contains,
High heaven descends to meet its upward way,
And men celestial glories here attain.

Five opening gates swing outward and within,
Through which impressions find their way to thought;
Through them the harmonies of spheres rush in,
And man beholds the things that God has wrought.

Thought solves our mysteries, and finds things out
Through evidences which the senses bring;
And man becomes a god, and conquers doubt,
And turns him to his Father, worshipping.

Let us despise not, then, this house of clay;
Divinely built, infused with living light;
But love it more while in its walls we stay.
Abiding here, full glory fills our sight.
Thayer, Kan.,

WORMS

By E. C. LAUGHLIN, M. D.

"O doctor!" thus the mother cries,
And there is terror in her eyes,
"We hope you haven't come too late,
The baby's in a dreadful state.
His eyes are bright, he cries at night,
His little clothes are getting tight
And when he wakes he kicks and squirms—
I fear the little dear's got worms!"

"And, doctor," iterates Aunt Sue,
A maiden lady, tried and true,
" 'T is this that most aroused my fears:
He's too precocious for his years.
With such a brain I fear 't is vain
His strength and vigor to maintain;
This state my point of view confirms—
I'm sure the little dear's got worms!"

"Yes, doctor," Grandmamma avers,
And who can doubt these signs of hers?
"Around his mouth's a line of white,
He grits his little teeth at night,
He works his toes, he picks his nose,
And when he sleeps his eyes don't close.
Don't talk to me of silly germs—
I know the little dear's got worms!"
Paris, Ill.

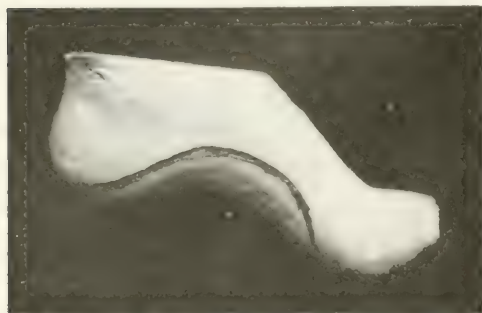
ICHTHYOL IN TARSALGIA AND META-TARSALGIA

Recently in one of your journals, of which I was and am an interested reader, I noted your appeal to the "new blood" as well as your emphasis on the word "write." So here goes.

I believe the following case will interest and possibly prove of benefit to some of my colleagues who perchance happen upon similar cases:

Patient, a woman, 32 years of age and well nourished, with good family history, but who has had the usual diseases of childhood; also, more recently, two attacks of tonsillitis, the last of these about a year ago, since when the tonsils have been normal. She has three

children, all perfectly healthy. The births proceeded normally. The only thing in her previous history is, that nine years ago she stepped into a hole and sprained an ankle, so that she was unable to walk for several weeks; however, subsequently she had no distressing symptom, except that occasionally, on very



Illustrating characteristic arch predisposing to metatarsalgia, and outline of support

cold mornings, the ankle will be a bit painful, but this soon disappears after moving about. Three years ago she again turned the ankle, but this time was inconvenienced for but a day. Now for the present.

One day the lady, upon arising, again felt that slight pain in the region just below the external malleolus, but paid no attention to it, until by nightfall, when it became quite disagreeable. This was on Friday. Saturday the pain was quite severe. Sunday she was unable to walk or bear her weight on the foot.

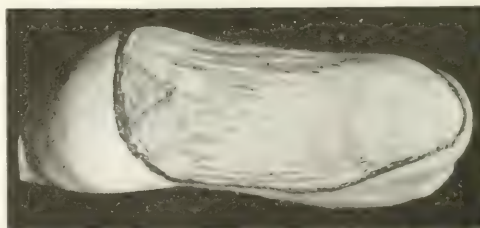
She had not wrenched her foot and denied all knowledge of any additional injury that could bear any relation to the present condition. Examination showed a condition in every way indicative (although in reality simulative) of a sprained ankle or an infection. There was redness, swelling, feverish state, painfulness and tenderness of the ankle-joint, also of the dorsum of the foot. Motion was limited, particularly as to dorsal flexion. There was decided puffiness just to the rear and below the external malleolus, this being compressible and very painful upon deep pressure. Pressure on the synovial membranes of the tendons in the anterior annular ligament caused excruciating pain.

Further examination revealed a condition that I have found quite frequently, of late years, particularly among the wealthier class of patients. This is a condition which, I am confident, is too often overlooked, if at all pathognomized by many of us, but the recognition of which many a time would elucidate

the condition and save us poor erring mortals at least the necessity of considerable unnecessary worry. I specifically refer to the contraction of the plantar fascia, which gives rise to pes cavus (which may, to a certain degree, be inherited), cramped toes and callous skin on the anterior plantar arch, resulting for the most part (together with the inherited tendency) from tight, pointed shoes with ridiculously high heels. In my case, heavy weight, long standing, nervous exhaustion, worry, and the previous ankle injury precipitated the condition described, and gave rise to tarsalgia or metatarsalgia, a condition very painful, sudden in onset, and often misleading as to its true nature.

Now for my treatment, and the good services of ichthyol. I used a 25 percent solution of this valuable drug in glycerin, painting it over the entire ankle and foot very thickly and then covering the part with absorbent cotton and bandaging in the usual manner. In one hour, approximately, the neuralgic pain, as it is generally called, eased up, and the patient was made comfortable; which, after all, is what sick people want of us. Of course, the patient was told to keep the foot in a horizontal position. The following day the pain had entirely disappeared, with swelling greatly reduced and tenderness materially lessened. Another application was made in like manner, and on the third day all the distressing symptoms had disappeared.

Now a plaster-of-paris impression of the foot was made and from this a proper foot plate modeled. I prefer to have it made of German-silver and have it extend well forward, so as to raise the anterior arch as well



Showing how foot-plate is modeled to fit the plaster cast impression

as to equalize the pressure on the weight-bearing surface of the foot. This measure readily relieves, as well as prevents, recurrence of the tarsalgia, much to the comfort of the patient and the satisfaction of the physician.

A word of warning here may not be amiss, namely: one should be on the alert for a similar manifestation in the other foot, as a pro-

phylactic measure, and when a contracted foot is exhibited or the tendency observed, a plate, as above, should be prescribed for this foot, too. Besides, this has the advantage of collecting a fee for two casts, instead of one, in addition to having a grateful patient.

W. H. C. HATTEOTH.

San Francisco, Calif.

ARE YOU INTERESTED IN CHICKENS?

In the January number of *CLINICAL MEDICINE* we made the suggestion that any reader who wanted to exchange some commodity of his own for something someone else had, would be given an opportunity to do so through these pages.

Dr. R. A. Dehmel of South Germantown, Wisconsin, offers chickens, which as he says "are prize winners wherever shown." He has a few R. Comb Rhode Island Red Cockerels, at \$2.00 each; pullets to match, at \$1.00 to \$1.50 each; S. Comb White Leghorns, at \$1.50 to \$2.00 each; pullets to match, \$1.00 to \$1.50 each; eggs for hatching from best pen (either kind), at \$1.25 per dozen; eggs for hatching from second pen (either kind), at \$1.00 per dozen.

The doctor will exchange a pen of his best S. C. White Leghorns for a pen of Anconas or White Wyandottes. He also has choice comb honey in season—basswood and white clover.

If you are interested, write to Doctor Dehmel. What can you "swap"?

ENLARGEMENT OF THYMUS GLAND

The thymus gland is a temporary organ, believed to be a true lymph-gland, but its nature and function are as yet very little understood. It attains its full size at the end of the second year, then gradually atrophies and disappears at the end of about the thirteenth year; in some cases, however, its shrunken lobules or masses remain even later in life. Situated in the anterior superior mediastinum, the thymus rests upon the pericardium, the arch of the aorta, and in the neck it lies directly on the trachea. Each lateral lobe, or entire gland, is enclosed in a capsule. The primary lobules vary in size from that of a pin's head to a hazel-nut. At birth, it weighs from 3 to 5 Grams. The blood-vessels supplying the gland are derived from the superior and inferior thyroid and the internal mammary arteries; the neural supply from the sympathetic, pneumogastric, phrenic, and possibly a few branches from the hypoglossal nerves.

The thymus is subject to disease. Syphilis of the gland is commonly characterized by the appearance of gummata. Hyperemia, inflammation, and abscesses are not common. Tumors most commonly found are lymphomata and lymphatic sarcomata; epitheliomata are very rare.

The sudden death of apparently healthy infants (sometimes found dead in bed) has been due, in many instances, to a sudden attack of dyspnea (followed by cyanosis) and consequent death. When this has happened, the thymus was found greatly enlarged, and death was thought to have been directly brought



Fig. 1. Anterior view of thymus gland. Notice its dense capsule and one of the carotid arteries

about, by pressure upon the pneumogastric nerve, trachea or, in some instances, on the great vessels. Under these circumstances, autopsy revealed the thymus immensely enlarged, often weighing over one ounce and crowding all the other structures in the anterior middle mediastinum. In 24 cases of acromegaly in which it was examined, the thymus was hypertrophied in 7 instances (Furnival).

Just what is the function of the thymus gland in infancy is not known. Bumman found in it minute quantities of a substance containing iodine. A number of German and English authors have thought that its internal secretion has an influence in combating infectious diseases, while others suggest

a possible role in the development of the infant's organs.

In the following, I wish to relate a personal observation in a case involving enlarged thymus in an infant upon which, after its death, I was so fortunate as to perform necropsy.

The mother of the child in question (American) was 35 years of age; had had the ordinary diseases of childhood; no luetic infection. She had two children. On June 15, 1913, I delivered her of a 9-pound healthy girl child; labor was short and easy; no instruments were used. The puerperal period was short and without any complications.



Fig. 2. Posterior view of thymus gland. Notice the arch of aorta and its relation to the gland.

The mother nursed the baby for two months, when her milk failed, after which she fed the baby modified cow's milk. The baby gained in weight and appeared normal and healthy in every respect, except that on February 14, 1914, it had an attack of slight intestinal disorder, but from which it recovered completely after a short treatment.

March 28, 1914, I received a telephone hurry-call, that the baby was dying. I got there in a short time, but the child was dead ten minutes before my arrival. The mother told me that the child was in its usual condition and playing with the other children, when suddenly it had a slight coughing spell, became cyanotic and died in a few minutes. Exam-

ination of the dead body revealed a large area of dulness upon percussing over the sternal region, and the peculiar circumstances suggested enlargement of the thymus gland as the cause of death.

Finding at the necropsy: Body well nourished; weight about 18 pounds; rigor mortis well developed. The opened thoracic cavity showed the thymus gland in the field of operation. Being carefully dissected from its bed, which extended high up to the thyroid gland, it was found very much enlarged and markedly congested, and weighing more than one ounce. It was reddish in color. It felt soft, and no hard nodules could be discovered in the mass, which was enclosed in a dense capsule. Section revealed nothing abnormal, except the presence of a large amount of blood. There were no cysts. The blood-vessels and glandular tissue were well developed; the lungs apparently were normal in position and lobulation; no free fluid in the pleural cavities. The pericardial cavity contained a straw-colored fluid; the heart was normal both in condition and location. There were no other enlarged mediastinal lymph-glands and no diaphragmatic hernia.

This unique case has suggested to me the following questions:

1. Could we have helped this baby if the diagnosis had been made before death ensued?
2. Is there any drug or agency that might be of value?
3. Could we operate upon the gland, and when and how?
4. What is the function of the thymus gland, according to latest studies?
5. What is the internal secretion and what are its chemical constituents?

In this connection I desire to thank Dr. R. R. Whitten, in whose service this case occurred, for assisting at the necropsy.

JOSEPH JOHNS.

Ionia, Mich.

A TESTIMONIAL TO CLINICAL MEDICINE

Your giant ampules of autogenous mental pabulum, if taken in twelve monthly doses by the think route, keep the bats out of one's belfrey, the cobwebs out of one's spinach, and the hypertrophy out of the knees of one's trousers and all at the small cost of two dollars a year.

J. O. R.

Washington, D. C.

[Right you are! And the medicament is easily administered and pleasant to the palate,

leaving no disagreeable taste in the mouth or other deleterious after-effects. Take no substitute. Have you renewed your "prescription"? Wouldn't you like to prescribe (and pay for) twelve similar "ampules" for a friend? —Ed.]

DYSENTERY CURED IN TWO INJECTIONS

You may be interested to know that a dentist friend of mine, for many years a sufferer from dysentery, has entirely recovered, as a result of taking two hypodermics of emetine at my suggestion.

He has had treatment for years for this trouble, from some of the best men in this part of the country, and hitherto without results except such transient relief as follows the heavy use of astringents. It was evident, however, that Mr. Entameba Bug was the gentleman who was causing his trouble, and to say that he is tickled at having banished him from the premises, is but putting it mildly.

EDWIN F. BOWERS.

New York City.

THERAPEUTIC COMMENTS BY PRO- FESSOR ELLINGWOOD

I was very much interested in an account in your February issue of the delivery of a mother, on three separate occasions, of a child in transverse presentation. In December, I published an article in your journal advising the use of measures during the entire course of pregnancy, to preserve normal conditions. Such a case as this one referred to is precisely one in which the measures there advised will be found of inestimable value. By some means, that we probably never shall be able to explain, normal conditions are so preserved that malpositions are seldom found.

There is another factor in this particular case. The Doctor says nothing about the weight of the first two children; but the third weighed ten pounds. The course advised in the article referred to, when carefully understood and followed, is capable of preventing a child assuming large proportions before birth, and of preventing the growth of deficient children. All that is necessary is, that the attending physician be enabled to determine whether the mother will be likely to give birth to a large child or a small one. Then he must understand the scientific adjustment to the mother of essential-food principles, that these be properly adapted to the child.

This course sounds a good deal more difficult than it will be found to be. I believe the day is here when a physician is adjudged culpable for neglecting a patient as to occurrence of three transverse presentations. The blame, however, is not to be thrown upon the individual physician. It is to be thrown on the methods of teaching in the colleges; encouraging surgical measures in obstetric cases, and in every way disparaging the use of medicines.

Doctor Bailey has made a valuable suggestion to your readers for the use of lobelia. This wonderful remedy was taboo for three-fourths of a century, because of its first patronage and its presumed poisonous properties. Now, when we come to use it hypodermically, we find that, like ipecac, the manner of administration covers a field so broad, so sufficient, so comprehensive, and in such an exceedingly satisfactory manner that we are doing our patients and ourselves a great injustice if we do not at once find out all about it.

We have learned that emetine hydrochloride, given hypodermically, is a most effective remedy in otherwise uncontrollable hemorrhage, and that, further, this alkaloid is proving to be almost as specific for amebic dysentery as quinine is for malaria. What would you think of a remedy that will cover six or eight distinct conditions as effectively as emetine controls dysentery? This is what we are learning about lobelia when administered in a form specially prepared for that purpose. True, the same results are obtained from its fluid preparation, but accompanied, usually, by emesis.

On page 162 of the February issue of your journal is an interesting article on first aid to those needing artificial respiration. These are cases in which a full hypodermic dose of lobelia, repeated in half an hour or an hour, is proving to be wonderfully efficient as auxiliary to all other measures, and it is surprising in how many instances it is sufficient alone and unsupported. I would suggest, however, that a lowered temperature should never be overlooked. In asphyxia, the persistent application of heat or the pouring at some height of hot water from a pitcher gently over the spine or all over the surface of the skin should always be resorted to, especially if a little time is required to secure some of the measures upon which further reliance can be placed.

I believe that lobeline sulphate has an immense field in the future. Although Doctor Abbott has been offering it to his patrons for

some years, they do not seem to have taken to it with avidity. I recommend that the readers of *THE CLINIC* at once familiarize themselves with the action of this masterful drug.

Doctor Keller's report on the epidemic of acute icterus impels me to say that here symptoms are presented that will be met specifically by the remedies mentioned in my article, in your January issue, on the action of the five good liver-remedies.

However, the acute symptoms demand another remedy or two. The temperature will subside satisfactorily under the use of aconite (or aconitine) in small and frequent doses. The local soreness, tenderness, acute tiny sharp cutting pains through the liver, which generally are present, and restricted abdominal tenderness, will specifically be met with bryonia; 20 drops of this remedy in a 4-ounce mixture, a teaspoonful to be given every hour, will cause these symptoms to abate. So satisfactorily does this remedy act, in conjunction with chionanthus, for the icterus, or with leptandra, that the prescriber will be convinced of the specific action of these drugs.

It is not necessary to give active hepatic remedies. I think better results will be seen from the administration of a saline laxative with the above, without the calomel, as these two remedies named are slightly laxative in themselves; and a laxative effect only is needed. Active physics must be avoided. From this simple course, with persistent heat externally, and perhaps, for its effect on the toxins, 8 or ten drops of echinacea every two or three hours, a satisfactory termination of this condition will be secured in a very short time.

Doctor Cosgrove, in his article, speaks of the action of gelseminine as an anodyne. It should be more generally known that this drug (or gelsemium), given in sufficient dosage, either hypodermically or by the mouth, will control a great many pains that are supposed to depend upon local causes only. Toothaches occur with persistent facility when the patient's stomach is very sour, the nerve being especially susceptible to irritation. If the patient is given from 1 to 5 drops of gelsemium every hour, with a single dose of bicarbonate of sodium, of 20 or 30 grains, or a good thorough dose of Abbott's saline laxative, the pain will disappear as if the result of a hypodermic injection of morphine.

Furthermore, gelsemium directly antidotes the irritating influence of every form of toxemia that induces rheumatism, acting in per-

fect harmony with macrotys for this result. If the readers of this journal will get into the habit of prescribing macrotine and gelseminine together, in the treatment of every form of muscular rheumatism, especially myalgia, lumbago, torticollis, and tic, they will be surprised at the facility with which these remedies will permanently remove those conditions. They are of value, also, in articular rheumatism where the inflammatory action involves the contiguous muscular structures. I believe that I could write a small book on the beneficial action of these two remedies alone in this class of disorders.

FINLEY ELLINGWOOD.

Chicago, Ill.

[The foregoing comments of Doctor Ellingwood on the February number of *CLINICAL MEDICINE* are full of meat. There are few men in this country—or any other country—who know the vegetable remedies as does Doctor Ellingwood; and when he talks we all sit at his feet. We are planning for more of his articles in early issues of this journal—the Doctor has promised them—and we hope he will also help us by commenting and criticizing here and there, as the spirit moves him.

By the way—have you seen the January number of *Ellingwood's Therapist*? It's a remarkable one, devoted entirely to a discussion of *lobelia*. This is a great remedy, and Ellingwood is its prophet! If you want to know all about this substance—and of course you do—send stamps to Professor Ellingwood and ask him to send you a copy.

And, speaking of *lobelia*, don't forget that its action is fully represented by lobeline sulphate, an alkaloid the possibilities of which are dimly understood as yet. Some day, we believe, it will replace the galenic preparation, just as emetine is replacing ipecac. In a personal letter, Doctor Ellingwood says, "I believe that your readers ought all to patronize lobeline sulphate." Send him stamps for a copy of his "lobelia number," and you will understand the "why" of his enthusiasm. —ED.]

HOW I SUCCEED IN PNEUMONIA.

I was very much shocked to read in the St. Louis papers that my old professor of the practice of medicine in the Beaumont Medical College (now the St. Louis University) was to be buried, and that he had died from pneumonia.

For many years I have not lost a case—when I got it early and had full control. I

clean out the bowels thoroughly with calomel, gr. 1-6; podophyllin, gr. 1-6; and bilein. I give the defervescent compound every thirty minutes for ten doses, then every hour for ten, and then every two hours; nuclein solution tablets, 5 grains, every four hours; creosote carbonate, 5 minims, every four hours, for its action on the bowels and lungs, and to start the internal secretions; and always an enema of normal salt solution every day. This is important. In desperate cases two should be given.

Where I cannot give the enema, I give sodium chloride, grs. 10; bicarbonate of potash, grs. 5; water, 8 ounces; lemon juice, 2 spoonfuls. This makes a nice drink and replaces the chlorides in the blood.

For the cough and to aid expectoration I prescribe ammonium chloride, grs. 3; ammonium benzoate, grs. 2. These are put into capsules and 1 given every three hours, with a small tablet of emetine. Occasionally guaicol carbonate and sodium sulphocarbolate answer the indications nicely.

If you see your patients often, and meet all indications, they will get well promptly, although the friends of the patient will almost doubt that they had pneumonia. It is a pleasure to treat them with the alkaloids.

I have found that the tonsillitis tablet (containing aconitine, bryonin, atropine, and mercuric iodide) with one 5-grain tablet of nuclein, acts like a specific in tonsillitis. I use this or one of my own (which follows) and never fail: Ammonium chloride, grs. 3; phytolaccoid, gr. 1-2; specific tincture apis, min. 1; nuclein, grs. 5.—one such dose every hour or two.

IRA A. MARSHALL,

Ironton, Missouri.

IRRITATION FROM EMETINE

In a personal letter, Dr. Edwin F. Bowers, of New York, has made the suggestion that emetine hydrochloride, when used hypodermatically in the treatment of pyorrhea, dysentery or other disease, should be injected first into one arm, then into the other, alternately. Occasionally, he says, this drug when used subcutaneously causes some slight pain and swelling, together with a disagreeable itching at the site of introduction. The discomfort can be avoided, to a large extent at least, by injecting it alternately into the two arms as just suggested.

In this connection be sure to read the abstract printed on page 252 of the "What Others Are Doing" department. The writers referred to have noted the occasional swelling

at the point of injection of emetine hydrochloride and have observed that this is more likely to follow the second, third or later injection than the first one, and therefore he believe it is due to the toxemia induced by the destruction of the amebæ rather than to the direct action of the emetine itself.

Another point about using emetine: It has been brought to our attention that occasionally quite severe reaction follows the introduction of the solution of this alkaloidal salt into the pyorrheal sacs. This is probably due in part to the use of too strong solutions, in part to carrying the needle too deeply into the inflamed tissue surrounding. While this is the technic advised by Smith, we would suggest that in beginning treatment, at least, a blunt-pointed needle be used and that the sac simply be flooded with the solution, no effort being made to penetrate the tissues. We shall be glad to hear from those using the drug with reports on variation of technic. We have no doubt that our method of using emetine will be ultimately much improved.

Reports of brilliant successes with emetine in pyorrhea continue to come in. Some of the cures obtained are almost marvelous.

Do not forget that emetine hydrochloride is just as effective in arresting hemorrhage as it is in curing pyorrhea.

A VACCINE FOR HAY-FEVER

In answer to numerous inquiries from physicians throughout the United States, let me say that the vaccine or extract, used by me in the prevention and cure of hay-fever, is made from the combined pollen of Spanish needle, ragweed and golden-rod. One gram of the mixed pollen is ground in a mortar, with a few grains of pulverized flint, and moistened with carbolized normal-salt solution.¹ Enough of the solution is then added to make 500 Cc. The mixture is placed in a sterile flask, sealed and kept at refrigerator temperature for a week. It is then centrifuged, pipetted, put into ampules, and kept in a dark, cool place, for a year. This product is not active when freshly made.

The pollen must be secured from plants which have been pulled up by the roots, and potted indoors. In making the extract, the greatest care must be exercised to keep it from spoiling. Before being used clinically, it should be thoroughly tested, bacteriologically.

The beginning dose is 0.01 Cc. or less, administered subcutaneously, and gradually, according to the susceptibilities of the pa-

tient, the same as tuberculin. As a preventive, a dose is administered weekly, commencing six weeks or more before the expected attack of hay-fever. During the attack, a dose is given daily or less often, as indicated. It appears that patients who can take 0.5 Cc. of this extract without reacting, are immune to hay-fever. Overdoses produce all the symptoms of acute hay-fever and asthma within a few minutes after their administration.

During the past two years, I have treated with this vaccine or extract about 100 cases of hay-fever and without any failures; but, of course, the treatment is still new and on trial. The cases treated have been selected ones, and all my patients live in this locality. I shall be very glad to have physicians in other parts of the country test out this plan of treatment, and report results.

In all cases which presented any bacterial infection of the respiratory tract, I have employed the various bacterins, in conjunction with the hay-fever vaccine. The past season, I treated two patients with their initial attack of hay-fever. One required two doses, and the other, one dose. Neither recurred during the season.

I am aware that all these pollens have been repeatedly used before in the treatment of hay-fever, and used unsuccessfully, but I think the trouble lay, first, in the way the pollen was collected, and, second, in the method employed in the manufacture of the extract. Anyway, the results obtained with the new preparation, so far, certainly warrant further trial of this treatment in hay-fever, which has heretofore baffled all treatment.

I shall be very glad to answer inquiries from physicians interested in this treatment.

E. J. BURCH.

Carthage, Mo.

TREATMENT FOR SCIATICA.

On page 85 of *CLINICAL MEDICINE* for January, appears an article on treating sciatica. Others have preceded it, all very good and instructive.

In the early fall of 1913, and continuing to late spring of 1914, an epidemic (or near epidemic), of so-called sciatica prevailed here, extending west to the mountains and south and west to Denver. At least that was as far as my experience, or any case which came under my care or observation ranged.

With three exceptions all of my patients recovered. One of these, a woman, I was treating when I was suddenly called out of the

city. I left this case in charge of a doctor friend, and while I was away several efficient physicians, in and out of the university, had been called in consultation. Upon my return Christian Science was asked for and I quickly agreed. Christian Science was as useless as water—more so. Then chiropractors and osteopaths were employed. Again I was called, reestablished the menstruation and was able to give relief. Now, after massage by a Japanese, this woman is better, but *not* cured.

This failure, on my part or on the part of any medical man, to cure in ten or twelve days, does not seem excusable to me, and my reason for this statement is that I have not failed since, and I have treated or directed the treatment of twenty or thirty cases under my present method.

Does anyone know what causes sciatica? I do not believe anyone does. It is a symptomatic neuralgia of a short portion of one large nerve trunk, its neurons or their dependencies. I do not *know* this to be the case, but I have a very strong reason for my belief, and upon this my treatment is based. It is as follows:

I have not, nor can I find, a case in which sciatica occurred in male or female under puberty. Also, every case which came to my notice gave a history of some alimentary trouble of an important nature some time previous to, or during the attack. My conclusion was that there is absorption of toxins with their origin in the digestive tract. The symptoms would be explained by the presence of a microsporon, finding nutriment between the nerve filaments, their sheaths or the neurilemmas of the main nerve trunks, with rapid colonization, causing pressure and of course the resultant pain. That portion of nerve affected in sciatica, short though it is, seems to be a favorite one for their habitat.

Treatment: First, success of treatment depends on the length of time elapsing between the present attack and the time the treatment is begun. Although a previous attack will delay the apparent cure, it does not prevent it. It was found that those who applied for treatment within one week or not to exceed ten days could be discharged in fourteen days and occasionally one in eight, ten or twelve days, but usually about fourteen days. One case of over a year's standing required six weeks.

Regardless of age, sex or nationality, I administer six 1-4 grain calomel tablets, one-half hour apart, one tablet to a dose, followed in one hour after the last by a large dose of

any saline laxative desired. (Abbott's is very fine, but any one agreeable to the patient's taste may be used.) If in one hour no results are obtained, repeat the saline and be positive that the second dose produces free bowel elimination. Arrange the time to suit the patient's occupation, for he may be compelled to earn a living as long as he can possibly move about.

Each day I give hypodermically 1-6 grain biniodide of mercury, injected into buttocks, or if it cannot be tolerated every day, sodium cacodylate may be tried. Internally I give Lloyd's dioscorea and echinacea, 1 1-2 drop of each to four ounces of simple syrup, or 1 drop doses of apocynum in mixture for psychical effects and also to allay gastrointestinal irritation. Occasionally the biniodide and sodium cacodylate are not well borne by the patient, in which case I use Lloyd's subculoyd lobelia 1-2 Cc. and apocynum (specific tincture) same amount, and inject as nearly in the nerve sheath as possible. Always use a long fine needle, sharp, and inject with as little pain as you can. The largest amount of the lobelia and apocynum I use is 2 Cc. or 15 minims of each.

I allow my patients to eat whatever they have been accustomed to. When they become "weak" from too frequent bowel movements, I omit purgative treatment for one or two days. In two cases, I was compelled to inject in the gastrocnemius popliteal space and the second sacral, slightly to the affected side. Most of the injections were direct into the apex of the buttocks.

Until I adopted this treatment and up to the time of its commencement, I had nothing but failure. I secured relief previously, and that others also had accomplished. My cures, if any, were accidents. Since my adoption of the course which I have outlined, I have little dread of sciatica.

F. E. HUFNAIL.

Minneapolis, Minn.

[In regarding sciatica as an expression of autotoxemia, Dr. Hufnail takes the position which we have expounded for years. His line of treatment has about it the ring of rationality and effectiveness. We might suggest, if he will permit us, that, in view of the acidemia which nearly always underlies this condition, a thorough course of alkaline treatment should be associated with the eliminative measures suggested. The exact purposes of the remedies which he injects into the buttocks we confess we do not understand, but apparently they are of value. Injections of chloroform

into the nerve-sheath have been used, with good results; also of alcohol, osmic acid, adrenalin, cocaine and other substances. The objection to this whole line of treatments is that it is generally painful, and the patients are likely to object strenuously. "Baking" the limb in a proper hot-air apparatus gives great relief; or, in lieu of this, applications of hot epsom-salt solution to the limb, or of blisters to the sacrosciatic notch. If the limb can be immobilized, recovery will be most rapid. Who has something more to offer?—ED.]

MENDING A BROKEN NOSE

A recent newspaper article describes a method for treating a broken nose, by taking a strip of bone two inches long and a quarter of an inch wide, from the inner edge of the victim's own shoulder-blade and inserting this into his nose—the bone graft healing in four weeks, with the normal shape of the nose preserved. In this connection, I will briefly describe a method that I once employed with success in a case where a man's nose had been broken by a kick from a horse.

I took the ends of two goose-quills, about one and one-half inch in length, attached threads to the outer ends of the quills, inserted them into the nostrils, then fastened the threads to the sides of the nose with adhesive plaster, which kept the quills in place. The nose then was moulded into shape and retained so by means of a strip of sheet lead bent to form a splint. The result was highly satisfactory; in fact, so much so that the man's friends congratulated him on having a proboscis better-looking than the original one.

GEORGE D. STANTON,

Stonington, Conn.

THE PRICE OF ASPIRIN

In the January number of *CLINICAL MEDICINE* (page 67), under the title, "Salophen versus Aspirin," reference was made to the price of the latter preparation, and the statement made that it was quoted at \$1.00 per ounce.

We have received a letter from the Bayer Company, of New York, informing us that we are in error, inasmuch as aspirin is selling, in 1-ounce cartons, at 58 cents, and no druggist should pay more than that for it.

It is further asserted that since the present war began there has been no advance in the price of the Bayer products, with the exception of aspirin and veronal. The former has been

advanced 15 cents an ounce; the latter, 90 cents an ounce. This increase of price became necessary for the reason that the cost of the raw material employed in the manufacture of these two products in the company's plant in Albany, New York, is higher than it was before the beginning of the war.

We are glad to bring these facts to the attention of our readers.

ABDOMINAL GRIP, WITH METHOD OF TREATMENT

Influenza, or grip, has been a resident of the United States for about a quarter of a century, and there is not a hamlet or a settlement, no matter how remote or inaccessible, which has not been visited by it, at some time or other, during this period. This disease is generally epidemic in character, but at certain times it has become pandemic. There is no disease that exhibits so many peculiar characteristics; and there is none so treacherous in its dealings with the human family.

The writer is now in the midst of an epidemic of grip, and the disease is playing some very unusual pranks here. Being an acute infectious disease of bacterial origin, one would only expect such variations as would grow out of the difference in temperament and constitution of different individuals affected, but influenza does not stop at this point. In the epidemic with which we are now engaged not only are all the symptoms of the disease exhibited, but some serious ones that we have never met before with influenza.

About fifty percent of our patients present an acute hepatitis. In these patients, the seat of the disease seems to be in the liver instead of the mucous membrane of the respiratory tract. While these patients all have a congestion of the mucous membrane of the nose, throat, and bronchial tract, yet it is not so severe as in those in which the liver is involved, and it soon clears up when the hepatic function is restored.

The gastric symptoms are very pronounced, especially in children at the beginning. Often vomiting is the first symptom, and it is hard to control. In all patients presenting hepatic complication the temperature runs high and it is not readily reduced. In several patients it has registered 105° F. for several days; and when it was brought down with antipyretics and baths, it would soon rise again when these influences were withdrawn. This pyrexia continues from twelve to fifteen days, according to the severity of the hepatic involvement.

Pain and tenderness over the gastrohepatic region has been very acute. I have seldom seen patients suffer so acutely and continuously as during this epidemic. No position can be found in which they rest well. They are constantly asking to be moved. Then, when the nurse attempts to move them, she is often told to stop, the pain experienced is so great.

Breathing is often painful, and coughing produces intense suffering, so great that pneumonia or pleuro-pneumonia is often suspected.

On palpation the liver is found much enlarged, the region of dulness extending from one to three inches beyond the normal boundary. In one case the hepatic enlargement was so marked that it was easily seen by ocular comparison of the right and left sides. There is marked tenderness on pressure, extending from the hepatic region across to that of the stomach, and in some patients all over the abdomen.

The bowels are always constipated and in the majority of cases have been tympanitic. Jaundice is invariably present, and only varied in profoundness with the severity of the disease.

Many of these cases have been diagnosed in the country as typhoid fever. Many of our patients are delirious, some of them bordering on violence, while others have a low, muttering delirium and pick at the bed-clothes. One patient in particular, a man 64 years of age, did not remember anything that transpired during the two weeks of his illness. The temperature continued uninterrupted between normal and 105° F. for eighteen days, and then, after a profuse sweat, dropped to 97° F. It was two weeks before it came up to normal again.

We are glad to say that my patients have all recovered, although some of them have not fully regained their strength. During this siege I have had an opportunity to test many remedies and to formulate a line of treatment that I believe hard to improve. It is to be remembered that, in all forms of this disease, the growth of the bacteria is rapid and therefore the elaboration of their toxins is equally rapid. These toxins poison all the tissues and fluids of the body, impairing cell-activity everywhere, producing irritation and inflammation, and increasing the congestion by this paralyzing effect on the walls of the vessels. This being true, the plan of treatment is plain; we must sustain our patients and aid nature until these toxins are eliminated.

The first step is to clear the intestinal tract, and this must be done thoroughly. The remedy best suited for this is calomel, followed by saline laxative. In my cases of hepatic involvement, calomel, bilein, and podophyllin, were administered in sufficient dosage every third or fourth day, and during the interval the bowels were kept well open with the saline laxative.

The bowel movements are always foul-smelling in these cases and intestinal antiseptics (the sulphocarbolates) should be given "to effect." The writer took special pains to observe that this measure has a controlling influence on the high temperature. Just as soon as the alimentary canal was cleared of all former debris, and the stools rendered odorless, the temperature would drop from one to three degrees, according to the severity of the case. This is easily understood when we remember that the system is already overwhelmed with toxins, and to shut off their absorption from this source can not help but be good.

Aconitine is the remedy *par excellence* at the beginning of an attack, especially in robust patients. It reduces the rapid heart action, controls the circulation by reducing the arterial tension, and helps to eliminate poison by increasing the action of the skin.

Do not rely upon the tincture of aconite. I came very near letting a little patient die through prescribing a worthless tincture, because I had allowed myself to run out of the granules of the active principle. In the beginning of these acute cases the aconitine should be administered every twenty to thirty minutes, until effect, then every two or three hours as indicated. If the patient borders on the sthenic type, the defervescent compound can be used to good advantage.

Another line of treatment is very important for this class of cases, and this is to support and reinforce the phagocytic power of the system. The writer has found that nuclein is the best remedy for this purpose. Push it in the beginning, then as required. Calcidin is another remedy of value in these cases. Just how it acts I do not know, but it is a great neutralizer of toxins and poisons. The object in treatment of these serious cases is to make every organ that can eliminate poison do its very best. The kidneys should not be forgotten. The writer uses arbutin and plenty of water for this purpose.

In cases requiring digitalis, squills can be added with good effect.

When the patient suffers with a dry cough and complains of great rawness and soreness

in the chest I know of no more effective remedy than the compound tincture of benzoin. This agent not only relieves the soreness, but loosens the bronchial secretions and acts as a mild stimulant generally. In the hepatic cases I secured good results from counter-irritation over the liver, and across the gastric region when pain and tenderness radiated in that direction.

C. W. CANAN,

Orkney Springs, Va.

[Doctor Canan has undoubtedly been dealing with the gastrointestinal type of influenza. For many years, contributors to periodical medical literature denied the existence of this form of the disease but more careful study proved conclusively that the bacillus of Pfeiffer frequently invaded the abdominal organs and that various gastric, intestinal and hepatic disorders of heretofore obscure origin, which have caused clinicians a great deal of trouble, may be directly due to its presence.]

The writer some years ago treated half a dozen patients whose symptoms closely resembled those described by Doctor Canan. At the same time, at least a dozen other individuals in the same neighborhood presented the usual grippal syndrome.

The temperature in the abdominal cases was persistently high, and in three instances pain in the hepatic and epigastric regions was intense from the second to the fifth day. Vomiting was an almost constant feature, and when this symptom was controlled by the administration of chlorodyne, or small doses of morphine and hyoscine, frequent bilious dejections caused extreme discomfort. In more than half the cases the area of hepatic dullness was increased one or two inches and the cecal region was exquisitely tender. The entire tongue was heavily coated with a dark yellow, sticky deposit, assuming towards the base a dark brown or black color. The sides were deeply indented. Widal and diazo tests were negative. The muscular and joint pains usually observed were accentuated and it was difficult for the patients to find comfort in any position.

Naturally these symptoms indicated a toxemia of intestinal origin, and calomel, podophyllin and irisoid were given rather freely (and frequently), followed in every case by a copious saline draught. Quinine salicylate, bryonin, and chionanthoid were administered every three hours and full doses of the sulphocarbolates (with hyoscyamine in pronouncedly diarrheal cases) every four. In a few cases quinine valerate and antipyrin

were substituted for quinine salicylate during the stage of hyperpyrexia. Epsom-salt sponge baths, followed by an alcohol rub, proved particularly grateful, and in practically every instance reduced the temperature one to two degrees for an hour or more. High enemata of decinormal salt solution were given each night.

Cactoid or digitalin, and strychnine arsenate, were used as cardiac conditions indicated and nuclein in massive dosage administered twice daily from the first. The nares, buccal cavity and pharynx were sprayed several times a day with dilute hydrogen peroxide and alkaline antiseptics.

Milk and Vichy (or lime water), clam bouillon, albumen water, and barley water were the only nutrient articles allowed for the first three or four days.

Methyl salicylate and guaiacol were inuncted freely over painful areas and hot compresses applied. Naturally, each case presented at some period peculiar features demanding definite medication, but under this basal treatment every patient recovered fully. Convalescence was established as a rule within ten days, but in two cases the retching, diarrhea and hepatic congestion persisted for two full weeks. One of these patients gave a distinct history of a cholecystitis of two years' standing. There has been no sign of disorder in the region of the gall-bladder since.—ED.]

A NEW WAY OF GIVING MORPHINE

I have not noticed that you or any of the many users of H-M-C ever have recommended their administration by introducing the remedy into the nasal fossa. I have used them in this way a number of times, with good results. If you will allow your mind to run back over anatomy, you will recall that the cranial and nasal cavities are separated by only a thin plate of bone, the cribriform plate of the ethmoid, this plate being pierced by a number of openings through which pass filaments of nerves. These nerves are directly connected, through the olfactory bulb, with the brain, and anesthesia of them seems to be carried direct to the brain.

The schneiderian membrane is supplied with an absorbent system, and absorption by it takes place more readily than is generally supposed, so that both the local and systemic effect are obtained.

I crush the tablet to fine powder, take a pinch between the thumb and finger, and, holding it close to the nostril, have the patient take a sharp deep inspiration, when the

powder is carried in and deposited on the membrane. This is accomplished without pain or annoyance, and with but little unpleasant taste, and the latter only when particles pass through and reach the taste-zone of the pharynx. In the same way, I have given morphine for years.

W. L. CAPELL.

Omaha, Neb.

[The idea is a novel one, but we confess to serious misgivings as to its safety, and as to the possibility of habituation. It is *too easy* for patients to take a narcotic in this way. Remember that this route is now generally employed by cocaine and heroin habitues, many of whom have, no doubt, been led into the habit largely through freedom from the pain and inconvenience of the needle, when the "snuff" is employed, together with the rapidity with which relief is secured by this method. Our advice is to place narcotics in the hands of patients as rarely as possible, depending mainly upon the hypodermic syringe, *used with your own hands*.—ED.]

CURRENT COMMENT BY A COUNTRY DOCTOR

Life - Insurance Examination.—Life-insurance work has its advantages. The pay is certain and the examiner may feel (and justly so) that a certain amount of prestige is gained through being trusted with a work so important to the wellbeing of society. However, the subject has two sides. There is no work requiring a higher degree of technical efficiency than the search for the abnormal in the supposedly normal. Anyone who has served as examiner for the United States Government, especially in that ultra rigid branch of the service, the Marine Corps, even if a civilian, can say this; and the same rule applies to any line of physical examination, civil or governmental. But when such examination-work is the entire or at least an important part of a physician's duty, the problem is not the same as when only an occasional examination is made. Shall we call the latter the "sporadic" examination?

The writer thinks that, as a rule, the country practitioner would be better off without having to undertake this work, but the circumstances usually are such that he can not well get out of it. To the lay mind, it is a very simple matter, and a wrong inter-

pretation is likely to be placed upon refusal to do the work.

The best way is, to go ahead and do it when the work offers. Pay absolutely no attention to the possible effect that rejections may have upon family practice. Be perfectly noncommittal to both applicant and agent as far as possible. Make the examination with military accuracy and attention to detail, always remembering that you are not to blame because Mr. Man has neglected the insurance duty for many years. You can not afford to cover up the fact, if known to you, that Mr. M. has been a brave fighter of booze for many years, that he has had a visitation from one of the unholy venereal trinity, nor, yet, that other little things have happened in his career or exist in his family history that modify his chances for acceptance as an insurance risk.

It is not for the doctor to tell lies, to get delayed family protection. Up to date companies as well as organizations of fraternal character protect you in this matter, some even furnishing a supplementary form, to be used in case you can not protect with a certainty the contents of the original examination-blank.

There are many ways of relieving the examiner, who does his duty, from having trouble with his clientele. One way is, to suggest that an examination of urine be made by the home office or that further examination be requested. The medical examiners of insurance organizations make it their business to attend to these matters and can be depended upon to aid the local examiner in every way. It is to their interest to do so.

Sometimes a serious illness awakens a man to the necessity of insurance. If he approaches his family physician, he should be aided to get protection, if that is possible. Have him be frank, and take the same course yourself. It may be that he can be accepted by this course, even if at times at an increased rate or with certain modifications in the policy, if he will submit to a rigid examination and perhaps reexamination after a stated time.

Catalytic Action, and the Small Dose.—Scuessler believed that he had solved the problem of treating human ills and forever done away with empiricism by means of his "ash analysis." He scientifically demonstrated the application of the tissue-salts in disease, but he failed to take into consideration the complexities of organic chemistry and the catalytic action of substances that

aid in the metabolism but fail to become incorporated into the living organism as a permanency; although still performing function in body change, whether passing out unchanged or as altered and complex end-products of the physiological laboratory. (Perhaps it would be better to say human laboratory, whether it be normal physiological or pathological.) Scuessler was not to blame for failing to do away with empiricism and place medicine upon a demonstrated chemical basis, for, we are at the beginning of the investigation of this department of science and its application to therapeutics.

The Journal of the American Medical Association of December 26 well comments upon the influence of flavors and vitamins on the human organism. It touches upon the effects upon appetite of even subtle flavors caused by the symbiosis of certain bacteria. The article well emphasizes the wonderful power of the minute over the concrete.

Turn which way we will, and the same thing is brought out, whether it be by demonstration of the inhibitory power of almost unbelievable dilutions of emetine over amebas, or of the lack of seemingly negligible quantities of vitamin to cause cell starvation or death. Daily the advance of science places further confirmation on the often empirically demonstrated effects of the small dose of certain agents. This in face of the fact that we admit that organisms visible only through the ultramicroscope can demonstrate chemical changes capable of overcoming the resistance power of adult human life.

The writer can not tell why the use of seemingly ridiculously small doses of rhusoid will, under a certain well defined symptom-complex, relieve incontinence of urine in one sex, yet, seldom, if ever, in the other; but his own experience as well as that of many others demonstrates to him that this is so. This is pure and simple empiricism, unless our homeopathic brethren claim that the rhus acts under the law of like cures like. Still, all-hail to the scientific empiricist—he gets the results now, and later it is shown why he got them.

The wonders are in the infinitely small as much as in the infinitely great. As I step to the door to see whether the storm is over, one star shows itself. It is so far away that it may have gone out before the dawn of the Christian era and still its light be coming to me, because the distance is so great that light vibrations proceeding through space at the rate of 180,000 feet per second are as nothing compared with the immensity of

distance and the insignificance of the human conception of time. That appals the imagination; however, the infinite littleness of division and its complexity is just as mind-staggering.

One does not have to speculate upon the fourth dimension to realize how little we actually know. However, it is a consolation to realize that we, the heirs of human time and endeavor, are at least on a firm foundation and edging along in the paths of knowledge and accuracy. Nothing but bigotry can head us off. But, how can a man be a medical nihilist? What right have we to the assumption that disease is self-limited or incurable?

Pneumonia and Alcoholism.—The writer has recently had very good success with his pneumonia-cases, or else they were very mild and would have gotten well anyway. Be that as it may, they seemed to progress favorably, mainly under aconitine and cactus, with a little bilein and calomel and saturation with calcium creosote. The strapping with adhesive plaster I have resorted to twice, with seemingly good results, but I prefer free access to the chest for inunction and other applications. However, one patient recently nearly required strapping with leather to the bed. He was a newcomer, vigorous, aged 30, and his habits unknown to me.

Early in the course, one of the family asked whether there was any objection to giving the man a little toddy. It was explained that there was, and that alcohol was given only in certain very rare instances under the system of treatment under way. The patient proceeded well until after crisis, when answer to an urgent call discovered him laboring under divers hallucinations, chief among them being of the actual presence in the room of divers unclassified creatures no specimens of which are in the National Museum, and also that he had passed from an invalid to the active and executive head of the house. Questioning brought out the fact that the patient had been a consistent and able fighter of the classic "booze," but along different lines from those of another resident of this very county, Hon. Richmond P. Hobson. Not being satisfied with the comparatively conservative methods along educational, argumentative and legislative channels, his method had been by annihilation through personal consumption. The effects had been crowned with success up to about one quart per day immediately prior to his illness, which probably was brought about largely by exposure.

During the period of high temperature, there had been nothing unusual in the course of the disease, the system being still so vigorous that it responded to reparative efforts in an amazing manner for an alcoholic, but, as soon as the fall of temperature occurred, the aforesaid zoological and other symptoms appeared.

The prompt administration of H-M-C to effect, at the same time following up elimination and giving brucine and capsicum, brought him through, although delirium reappeared as soon as the drugs were dropped or bromides, scutellaroid and drugs of lesser potency resorted to. At no time was there another temperature elevation or symptom of returning lung congestion. Not until the third day could the treatment—which had been carried out with the utmost caution, to avoid cumulative effect—be changed.

Up to the crisis, it had not been necessary to administer anything in the way of a hypnotic. Even gelseminine, the first thought of the writer in high temperature and evidences of excessive brain irritation, had not been required, much less hyoscine. After subsidence of the hallucinations, nervousness gradually quieted under scutellaroid and the tone improved under capsicum and brucine, only very small doses of the capsicum being given.

The former patient now concedes that the Hon. Mr. Hobson's system of booze fighting, whether practical in all details or not, is much better for its advocates, and he has resolved to follow the legislator's methods in the future. He will, unless the disease of alcoholism gets him again.

The use of *quinine in pneumonia* received considerable recent mention. In the form of the valerate, hydrobromide or ferrocyanide, it should be of service, if the quinine rule of never to give it until the secretions are established is observed; however, the writer has seldom found it necessary to depart from his customary list, except to maintain liver action and intestinal antiseptis. This list comprises aconitine and cactus, almost as a routine; veratrine, with an especially full and frequent pulse; pilocarpine, occasionally and cautiously; bryonia, especially with pleural involvement; brucine or strychnine as a stimulant; gelsemoid and hyoscine for delirium; ipecac, sanguinarine, and lobelia for their several indications; the "tissue-salt," potassium chloride, to aid resolution; calcium-creosote a plenty. And, no matter what other remedy is indicated, always intestinal

antiseptics and cholagoges when they are called for.

A. L. NOURSE.

Sawyer ville, Ala.

TRANSVERSE PRESENTATION

The three cases of transverse presentation related by Doctor Henriksen in the February issue of *CLINICAL MEDICINE*, p. 183, recall one that came under my care about one year ago. The position was left scapula anterior, left arm in vagina. Membranes had ruptured with first pain, which pain had continued without cessation for two hours when I was called. The uterus was firmly contracted, holding the child tightly in its abnormal position, from which it could not be moved even under fairly complete chloroform anesthesia, assisted by a full dose of H-M-C.

Bimanual attempts at last restored the arm, and soon the head was engaged in the upper strait. High forceps operation brought the child down easily and a little care prevented laceration. The mother and child got along normally, and there was no elevation of temperature during the puerperium.

The attempt was made to perform version, but after a half hour's hard work, it was decided to use the forceps. A neighbor woman gave the anesthetic and the husband supported the patient.

R. J. SMITH,

Bancroft, Idaho.

SUGAR AS AN OXYTOCIC. THE "TWILIGHT SLEEP"

I wish to thank you for your kindly comments upon my little article on "Smears" (*Med. Record*). The question "What do you want?" at the conclusion of your editorial has a personal appeal, and the answer is easy. It is, "I want to know." Therefore, to you and your army of readers permit me to put two negative questions. Personally, I think I know the positive answers; and my opinion may be corroborated, if necessary.

1. Why is not the juice of one lemon and a heaping tablespoonful of sugar dissolved in a tumblerful of water and administered to a patient in labor, cheaper, safer, and equally efficient in comparison with the hypodermic administration of pituitrin? How do you know?

2. Suppose that in a parturient woman the rectum has been cleansed by means of a purgative enema of, say, normal salt solution. Then, dissolving a tablet of H-M-C

and 20 grains of antipyrin in 4 ounces of warm water, this is slowly injected into the rectum and retained, to be absorbed. Suppose, further, that one tablet only of H-M-C were thus employed, and that subsequently an antipyrin enema of 20 grains to 4 ounces of water were administered every two hours in order to prolong or intensify the effect, if that be necessary.

Question: Is not, under this management, the child safer, and are not the maternal pains as much relieved as when subcutaneous and repeated injections of the narcotics are given? Does it not equal or surpass the so-called twilight sleep? And has it ever failed to give the anticipated good results, and, does it not begin to show its soothing effects within thirty minutes after administration? Has it failed you?

Reading *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* has led me to think that many of its clientele are interested in obstetrics, and I am standing around like a bird with its mouth open, waiting to be filled from an outpouring of better knowledge and experience which it is up to that clientele to furnish. This is an era of efficiency, and what I want is increased powers of performance, the application of which are commonly called wrinkles and shortcuts.

DOUGLAS H. STEWART.

New York City.

MORE ABOUT TWILIGHT SLEEP

I think your correspondent, writing in the August number, under "A Humane Woman," is rather unjust and somewhat hysterical. The plain inference from the magazine article that so stirred her indignation was that the scopolamine-morphine "method" was the prerogative of the Freiburg hospital and that it could not be successfully used by the ordinary physician or institution. Why, therefore, condemn them for the neglect of that which they are incompetent to apply? Also, why insult the profession by the insinuation that a large section of it is tainted with sexual perversion? This, at least, appears to be the inference she draws from the apocryphal account of some sadistic doctor "who derives pleasure from witnessing a primipara in the throes of labor?"

Such are the weird fancies which people absorb and emit from even high-class lay journals when they enter the field of medicine. From even the Hearst editorials one could not draw more insane conclusions.

The editor of *McClure's* complains of "an organized conspiracy against the method." Now, possibly some physicians resented the apparent conclusion that the "method" was the sole property of a German sanitarium. Although this was not directly affirmed, one must draw the conclusion that the method was not to be satisfactorily imitated elsewhere. The magazine, in a later article, tells of a woman who, not being able to obtain her favorite nurse for her approaching confinement, telephones her doctor on the strength of the earlier contribution in regard to her going to Freiburg. The doctor decidedly advises her to make the European trip (this apparently was before the present disturbances), the inference being still that the treatment could not be successfully applied at home.

Now, of course, the doctor who sends his maternity patients abroad "does not care to take confinements." Naturally, the plutocratic physician who treats his office clientele at from \$3.00 to \$5.00 per call does not care to leave his business for anything so tiresome as an ordinary confinement. Sending the patient away avoids the possible loss of the family by referring her to a colleague. So, Freiburg for his. But the average woman who by no means can afford such a luxury finds that she can get along tolerably well at home.

Furthermore, these lay publications can, as a rule, see but one side of the matter. I myself wrote both to *McClure's* and *The Woman's Home Journal*, endeavoring to correct some misconceptions involved in their articles, but, of course, neither cared to publish my communications. Naturally enough, the magazines are looking for interesting reading rather than dry discussion. The editor of the *Journal* wrote me that he thought any further comment on the matter should be carried on in medical literature, a sensible conclusion under ordinary conditions. But when a lot of false impressions are spread broadcast by popular literature we can by no means correct these through medical journals, which the people never are going to read.

The editor of *McClure's* wrote me that he had no intention of exploiting the Freiburg hospital, but simply wished to call attention to an unknown method. Still, in spite of any actual intention, the articles would no doubt have the effect of an advertisement, though I do not question his right to publish them.

But upon reflection the editor and the "Humane Woman" might make a reasonable

deduction as to the suspicion with which physicians regard habit-forming drugs. Does not nearly every "morphine-fiend" refer his downfall to some doctor who forced the habit upon him? Although, naturally, it would be a doctor, as lawyers and clergymen are not supposed to administer analgesics. People require relief from pain and then damn the man who gives it, even under protest, if they are too weak to resist the later effect of the necessary drugs. But here we have a "Humane Woman" and a lay editor making a counter charge against the same profession. In this connection an old rhyme suggests itself to me:

You can and you can't,
You will and you won't,
You'll be damned if you do,
You'll be damned if you don't.

Well, who's looney now?

As for Germany going us one better, the accounts I get from continental sources would indicate a callousness and neglect in European countries which would not be tolerated at all in America. Because Germany has one hospital where women of wealth and fashion may receive every luxury and refinement of care, does not affect the rank and file of women who must be turned over to the mercies of midwives and clinical students.

Now, it might be inferred from the foregoing that I myself oppose giving anodynes in labor. Far from it, however, and neither the reproaches of the woman or the editor touch me personally in any degree. I have endeavored by every reasonable means to allay any pain where I could safely do so. But I recognize that some who often would withhold anodynes where I would venture to give them do so from motives that are not inhuman or fiendish. Some element of danger lurks in every anesthesia.

Now, in respect to the scopolamine-morphine method. I have used it for some years and find it of value in certain conditions. It is not the panacea which the magazine writers would make it. I regard it as valuable in the first stage, but have had frequently to apply the forceps when it came to the second. The truth seems to be that normal deliveries can have the pain partly blunted, so that the woman forgets what has happened, but the really difficult cases still require artificial aid.

To conclude. Exaggerated and erroneous impressions always follow the reading of popular medical articles. People are prone to believe any unreasonable indictment against the medical profession. Physicians

are not of necessity any better than other respectable people, but as a rule are inclined to relieve suffering if possible and safe to do so. There is always an element of danger in anesthesia and often an extra expense to the patient. The doctor who administers hypodermic medication often is subject to many unjust aspersions. There is no "organized opposition" to the scopolamine-morphine method, but the occasional dangers of habit-forming drugs sometimes make the attendant hesitate to administer them. Chloroform to any extent requires a trained assistant, who may not always be obtained.

Finally, I can sympathize with Doctor Feige, in the October number. People often will take advice from anyone but the doctor, on the apparent ground that everyone but he understands medicine. Still, after a good bout with ineffectual pains, I can bring ninety-five percent of my patients to my way of thinking. There are all degrees of folly, but people who lack a grain of sense are the exception.

H. O. CARRINGTON.

New York, N. Y.

[We must bear in mind that "A Humane Woman" was not directing her remarks altogether, or even chiefly, at the article in *McClure's*, but to the editorial, in rejoinder, which appeared in the July number of *CLINICAL MEDICINE*; so that she is not quite so irrelevant or so illogical as Doctor Carrington makes it appear. In that editorial, we had, in effect, poohpooed the alleged novelty of the twilight sleep, and declared that it was a comparatively old affair, well known to thousands of physicians in this country, and actually practiced by them. Then, retorted "A Humane Woman," if that is the case, why is it that millions of women know nothing about it, and that the thing is still a secret?

The suggestion of sadism in the correspondent's reference to the young doctor who "derived pleasure from witnessing a primipara in the throes of labor" occurred to us, also; but we refrained from commenting on it for two reasons. First, we were not at all sure that our correspondent meant to suggest perversion. It is easy for us medical men, with our minds to certain angles bent, to read meanings into the layman's words that he did not know were there. To a physician, of course, at first blush, such a remark suggests

that the man was a sadist, and we resent his being made to stand for anything like a type of the profession. But, on second thought, we doubt very much whether that is really the significance of the thing. More likely the remark, both as made by the man and as quoted by our correspondent, was intended simply as a rather extreme expression of that stand-pat attitude which does unquestionably prevail among a great many even of the profession, that labor is a normal, physiological process, intended by nature to be painful—to which, somehow, pain adds heroism and worth—and from which something is detracted by robbing it of its pain.

Our second reason for avoiding a discussion of the implied sadism was, that it would have drawn us away from the main aspect of the subject. The real essence of our correspondent's rather bitter reproach was that the profession had apparently entered into a conspiracy of silence, if not of concealment—a state of affairs which the editor of *McClure's* also felt to be the case. And, in spite of Doctor Carrington's denial that such a conspiracy exists—no doubt it does not, in the sense of a deliberate conspiracy among physicians themselves—we are still of opinion, as we said in our editorial, that there *has* been a constitutional opposition on the part of organized medicine, such as organization invariably offers to all innovation and progress that does not originate within the sacrosanct circle.

However, this is all beside the mark now. The prime necessity of the moment is to get it into our heads, and to promulgate among our professional family, that the demand for the relief of suffering in labor is a perfectly proper and legitimate one, which the womanhood of the present day has an unquestioned right to make upon medical science. That, furthermore, it is an insistent demand, which, sooner or later, the medical profession will be compelled to satisfy, or to account to the public for its failure. That the twilight sleep of hyoscine and morphine affords an adequate and legitimate means of meeting the demand, the neglect of which is a plain dereliction of duty on the part of the physician. And that there is no reason whatever why this twilight sleep cannot be given to women in their own homes, provided a reasonable degree of skill and care and pains be applied to its administration.—Ed.]



Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

IN THE present installment, I am going to consider the tonic and alterative action of the three metallic remedies, copper, arsenic, and mercury, in the anemias and other conditions calling for treatment of this nature.

The blood, especially so far as its cell-elements are concerned, is a changing fluid. The cells of the blood, particularly the erythrocytes, undergo a phase of altruistic development whereby, like the embryonic tissues, they surrender their reproductive powers for the benefit of organism nutriment. Arrest of development at a certain point, therefore, means a degeneracy whereby the old blood-cells gain, like a cancer, at the expense of the organism as a whole. It is this condition that essentially constitutes what is called pernicious anemia. The red blood-cell, in this disease, has the embryonic potentialities of the cell in cancer. The factors underlying this arrested cell development of the blood imply more factors than the simple incapacity to take up iron and act as a carrier of oxygen.

The autotoxemia and constipation, which constitute the great danger of pernicious anemia, clearly are products of more than suboxidation due to imperfect oxygen-carrying powers of the red blood-cells.

There is, as any analysis of the cases will show, a toxemic precedent to the pernicious anemia, which either arrests completely proper development of the blood-cell, or which disappears, having produced merely temporary effects that disappear with it, as in the many cases of cures of alleged pernicious anemia resultant from ameboid dysentery, malaria, syphilis, scurvy, diabetes, and nephritis, and exceptionally reported after yellow-fever, acute hepatic atrophy, cholera, and a few other diseases. Here the original toxemia is the serious factor, and not the resulting arrest of blood-cell development. The blood-cells contain albuminous matter, as well as hemoglobin and fat. The supply of these, either directly or indirectly, through

healthy nutrition is absolutely necessary. Their proper distribution in relation to other elements likewise is needed.

These elements in the reproduction of conditions leading to the removal of spanemia are best obtained by the use of alteratives, which improve the nutrition of the body without exerting any very perceptible action upon individual organs. Healthy nutrition depends upon a proper supply of oxygen and nutriment to each tissue and organ in the body, and upon the proper amount and kind of tissue change in the various cells, and upon the proper removal of waste. The proper supply of oxygen and of nutriment to the body generally will depend upon the state of the assimilatory and digestive organs. And this proper supply of oxygen to the tissues, as well as removal of waste from them, will depend upon the circulation, and the removal of waste from the body generally will depend upon the lungs, bowels, skin, and kidneys.

Copper is reputed to be a violent poison, yet, except so far as its toxic effects as a foreign body in the eye are concerned, this repute is decidedly undeserved. Kiernan has called attention to the fact that copper enjoyed among alchemic physicians a great reputation for what later were called nervine alterative qualities, in epilepsy, chorea, and insanity; whereof Burton's "Anatomy of Melancholy" gives evidence. Its repute led Paracelsus to make it the basis of one of his metallic tinctures; and from him Rademacher took the therapeutic indications and the tincture at present employed by the Eclectics. That the Paracelsian use of copper never was completely abandoned by regular physicians, is apparent from the perusal of the first two American Dispensatories, those of Redman Coxe (1810) and of Thacher (1812). In both works, copper is recommended as an alterative tonic useful in epilepsy, chorea, and other spasmodic conditions, especially those connected with debility. Later therapeutists sustain this old repute of copper.

According to Philips, J. V. Shoemaker, Biddle, Hare, Lauder Brunton, Potter, Culbreth, Foster, and others, the drug, in small doses, stimulates both the heart and the capillary circulation and is a general nerve tonic. In the eighth and ninth decades of the nineteenth century, copper assumed a new phase in periodic medical literature. Luton and Liegeois showed that copper was of value in chlorosis, anemia, cachectic states, and as a nervine alterative. Some eighteen or twenty years ago, A. F. A. Price found that, while slow in affecting the secondary symptoms of syphilis, copper prevented the development of mucous patches and throat symptoms. The first evidence of copper saturation of the system was a voracious appetite, followed by giddiness, vertigo, prostration, and other symptoms characteristic of occupational copper poisoning. As with other alteratives, Price had the best results from small doses frequently repeated. In cachectic states, 1-1000 grain of copper sulphate once daily had proved of marked value. Later, Price confirmed his results and extended this therapy, showing the value of establishing copper tolerance in the early stages of syphilis.

As to the preparation to be employed, Redman Coxe, Thacher and Price, while finding copper sulphate of value, all agree that at times it produces unexpected dangerous untoward effects when the point of saturation is reached. These effects, through the influence of the drug upon the vascular system, often take—as Kiernan has shown—the direction of cardiac neuralgias and pseudo anginas. The double salts of copper, in small doses, exert a cardiac action similar to that of digitalin, strophanthin, helleborein, and so on. Hare prefers copper arsenite. I have found that under its use digestion and nutrition improve. It is superior to Fowler's solution in chorea and similar neuroses. Luton and Liegeois prefer a pill containing 1-6 grain of neutral copper acetate and 5-8 grain of crystalline sodium phosphate. For hypodermic use they employ a solution of copper phosphate, freshly made by dissolving 1 part in 2 1-2 parts each of glycerin and water. The specific tincture of copper of the Eclectics, which is the old Paracelsian tincture robbed of its crudities, has been employed in chlorosis, syphilis, chorea, epilepsy, neuralgia, and nervous adynamic states, in 3- to 6-minim doses, frequently repeated, until the evidences of saturation already described appear.

The therapeutic indications for copper, as named by Rademacher, are: a grayish complexion; sunken features; small, soft, wiry pulse; light-colored, very acid urine; and early nerve symptoms, hallucinations, convulsions, delirium, and so on. All of these symptoms are indications of what the older clinicians called nervous adynamia, a precursory suboxidation toxic stage of neurasthenia.

Arsenic is another agent of similar alterative type. It markedly stimulates, in small doses, the blood-making processes, and exerts a decided influence upon the general tone and on renal and hepatic action. It can be very advantageously combined with copper, with gold, and with the bitter and ferruginous tonics. Strychnine is a valuable adjuvant. The bromide of gold and arsenic preparations have an excellent field as alteratives in chlorosis.

The third alternative under consideration, mercury, sometimes is of decided benefit in chlorosis, even when there is no specific infection. Inunctions of a small amount of mercurial ointment once a day or every other day, or small doses of mercuric chloride, from 1-60 to 1-40 grain, prove very beneficial in some cases. When iron alone is given, it will be found quite often that the drug is not absorbed, but passes through and out of the bowels, or else it accumulates in the liver; in both instances failing to be utilized and assimilated into a living part of the vitalized organism. In this case, it has been found that the addition of nuclein solution to the prescription, in doses not exceeding 1 dram daily (preferably administered by being dropped under the tongue) apparently causes the fixation of the iron in the blood and tissues; and the gain will far exceed that accruing from the use either of iron or nuclein alone. The administration of the arsenates of strychnine, quinine, and iron with nuclein often will produce excellent results.

As the condition is essentially a hydremic toxemia, venesection would seem at times to be indicated. In the palmy days of this measure, so illogically disused by the profession for popular cosmetic reasons, excellent results were obtained from venesection by eminent clinicians. About a quarter of a century ago, Fordyce Barker revived it, with decided success. The use of normal salt solution undoubtedly adds to its efficacy, as this alone could initiate alterative conditions.

In connection with opotherapy, the value of diphtheria antitoxin must be remembered. This has often initiated, through its alterative action, improvement in leukemic states more grave than chlorosis. Like all alteratives, and inclusive of organotherapy, its use should be accompanied by careful watchfulness of elimination. To the neglect of this precaution we owe most of the failures and untoward effects of the therapy of chlorosis.

It should not be forgotten, in this connection, that an improvement may be overcome by under-elimination. The pale urine of nervous states is an indication of renal insufficiency, not a true renal elimination. Chlorotics, in the nature of things, are very likely to excrete, without eliminating. Free elimination should be maintained through all the excretory channels, especially through the bowels and kidneys. Frequently it is advisable to give some intestinal antiseptic, the sulphocarbolates being, perhaps, as good as any. It will often be necessary, also, to give some cardiac tonic.

In toxemic conditions, such as secondary malarial manifestations, with the resultant pallor, copper and arsenic are of decided value. Cases in which the periodic tendency has disappeared improve decidedly under copper and arsenic, when quinine and iron are worse than useless. The influence of arsenic is very marked in chronic rheumatism and so-called rheumatic gout, neuralgias of various sorts, in tic and hemiplegia, as also in angina pectoris, chorea, epilepsy, and asthma. In certain of the gouty bronchites, at the onset of phthisis, in imperfectly cleared-up pneumonic lung consolidation, arsenic acts sometimes with remarkable efficacy.

In the effects of arsenic and copper just detailed are to be seen the ideal action of the alterative, an action opposed in certain particulars to that of the restorative, to which category iron belongs.

For restoratives not causing tissue change there must be created a condition favorable to assimilation before the system can receive and apply them. If this does not occur, they act simply as poisons, by overaccumulation, whence the many objectionable untoward effects which occur from iron in cases of spanemia, where this restorative is not assimilated. In chlorosis, where iron notoriously fails in many cases, copper and arsenic very frequently produce marked and

decided improvement, not only as regards the red blood-cells, but in the general nervous vitality. The fact that arsenic acts as an excellent respiratory stimulant and tonic in mountain climbing makes it peculiarly suitable in conditions, such as chlorosis, where general air-hunger is as marked as in nephritis and diabetic conditions. Indeed, in most spanemic states, tissue air-hunger is a very unpleasant feature, sometimes underlying the condition of local exhaustion and of local pain which provokes local exhaustion.

The fact that the organic irons succeed better than the inorganic compounds is an indication that assimilation is necessary to the influence of a restorative, while an alterative of necessity provokes its own assimilation. Arsenic and copper have been found in small quantities in the thyroid gland, a fact that would indicate their natural presence as an alterative in the system.

The influence of both drugs upon the liver, the two-fold functions of which are so necessary to the tissue changes of the system, show that both drugs play a part in assisting assimilation and at the same time in destroying waste products. It must be remembered that, as Minot, the embryologist, has shown, the liver has two functions, one of which is a blood-making and the other a poison-destroying function. The stimulation of both of these functions is necessary to an alterative, under the principles already laid down.

The best time to operate on exophthalmic goiter cases is before cardiac dilation sets in. This may occur within a few weeks or may be delayed for months. The time to leave a case to medical treatment is during the period of cardiac dilation, which may be from a few months to two years after the onset of initial symptoms. Later again, operation may be considered during the periods of quiescence, which occur in all these cases.—*MacKechnie*.

In cases of hematuria suspect tuberculosis of the kidney and do not delay the animal-inoculation test too long. During the month of development other tests may be done. Many of these cases can be cured by nephrectomy if taken in the early stages, even before the cystoscope will reveal ureteral changes or the ordinary tests will show tuberculous infection.—*MacKechnie*.

Among the Books

KIRKE: "PHYSIOLOGY"

Kirke's Handbook of Physiology. Revised and Rewritten by Charles Wilson Greene, A. M., Ph. D. With 509 illustrations, many in colors. Eighth American revision. New York: William Wood & Co. 1914. Price \$3.00.

History is making very rapidly in the realm of physiology—especially in the division of physiologic chemistry. But, in the making, there is, as with all history, a large amount of incidental and spurious activity, the results of which, in the final evaluation, have to be winnowed from those of genuine and permanent progress. It is this discriminative task that the reviser of a standard textbook on physiology is obliged to perform in the preparation of his successive editions, and it is by the carefulness and efficiency with which he accomplishes this object that the continued success of a work stands or falls.

Judged from this standpoint, Doctor Greene's latest edition of Kirke measures up to the standard heretofore set for the book. It represents a very fair and judicial embodiment of the state of our most recent knowledge in physiology. It is neither surprising nor derogatory that the present edition retains the general size and amount of content of its predecessor, for, whatever additions have been made to the subject have virtually been offset by the abandonment of obsolete doctrines and practices. In our opinion, the new Kirke is about as good a textbook on physiology as the medical student—or the practitioner either, for that matter—could use.

GOODMAN: "BLOOD PRESSURE"

Blood Pressure, in Medicine and Surgery: A Guide for Students and Practitioners. By Edward H. Goodman, M. D., associate in medicine in the University of Pennsylvania. Philadelphia and New York: Lea & Febiger. 1914. Price \$1.50.

This, of course, is not the first or the only work on the blood pressure that has appeared in recent years, but it seems to have a place of its own in the literature of the subject,

nevertheless, in that the presentation is quite different from that attempted in any other book, at least so far as the reviewer has seen. The motif of the book is wholly clinical. It has been the author's avowed aim to make fully available the assistance which the study of blood pressure affords in the diagnosis, prognosis, and treatment of disease. With this end in view, the subject is presented in a manner conforming to the methods generally followed in presenting the rest of our clinical knowledge.

After a discussion, in the first few chapters, of the philosophy of blood pressure in general, and a description of the methods of estimating it, the author devotes the later chapters to separate considerations of the significance of blood pressure in the various classes of disease; in nervous disorders, in obstetrics, in surgery, in ophthalmology, and so on. Thus, the subject is expounded to the reader in the sequence, and from the standpoint, which, as a clinician, most nearly concerns him and most intelligibly appeals to him.

We cannot refrain from echoing here the warning of the author against the foolish practice of relying upon digital palpation for the estimation of the blood pressure. Every physician should furnish himself with a sphygmomanometer, and then procure a book like this of Goodman's from which to learn thoroughly how to use and to evaluate this phenomenon.

TULEY: "PEDIATRICS"

Pediatrics: A Manual for Students and Practitioners. By Henry Enos Tuley, A. B., M. D. Second edition, revised. Including a selected list of state-board examination questions. With 33 engravings. Philadelphia and New York: Lea & Febiger. 1914. Price \$1.00.

The present edition of this little book, which is published by Lea & Febiger as one of their Medical Epitome Series, is, of course, a very abridged form of the same author's larger textbook. The purpose of the abridgment is made sufficiently clear by the inclu-

sion of a set of state-board examination questions.

Its prime object, evidently, is to furnish the student with a "cram" for the state-board quiz—for which we do not criticize the authors and publishers of such books so much as the system which makes them necessary. So long as state-board examinations are conducted in the manner in which they are, presumably there will be a demand for short-cut manuals by means of which the unhappy student may, in the last few weeks, "prepare" himself for the ordeal; and one can hardly blame anyone concerned for the appearance of books of this character and for this purpose.

However, we would not be understood as saying that Doctor Tuley's smaller book has no other use or value than that of an examination cram. For the busy practitioner who has studied pediatrics from the ground up, it will undoubtedly prove a very useful reminder and reference. It must be admitted that the epitomizing has been done with great skill and judgment, so that the meat of the subject is all there—which cannot be said of every such attempted epitomization. Doctor Tuley is an excellent teacher.

BROTHERS: "MEDICAL JURISPRUDENCE"

Medical Jurisprudence: A Statement of the Law of Forensic Medicine. By Elmer D. Brothers, B. S., LL. B., of the Chicago Bar. St. Louis: The C. V. Mosby Company. 1914. Price \$3.00.

The author has been a lecturer on medical jurisprudence in the medical department of the University of Illinois, and elsewhere, for the last twenty years, and he now complains that during that time he has not been able to find a satisfactory text on the legal aspects of the subject to recommend to his students. So, in the last resort, he has written one himself.

We cannot—we really can not—see that he has improved very much upon the textbooks that already were in the field. Off-hand, we should venture a bet that Mr. Brothers' book represents the outline which he used in his lecture course before his students. At all events, that is what it amounts to—a lecture outline, and not a particularly well-arranged one at that—and, while it may very well serve the needs of Mr. Brothers' own classes, who sit under his personal instruction, while in his oral lectures

he follows the outline here laid down, it can hardly be expected to have much value for the student who does not enjoy that high privilege.

Mr. Brothers' intentions are excellent. There *is*, as he asseverates, a real need for a textbook that shall expound the legal phase of the subject; such a book is lacking. But, if he wishes to be the author of such a work, he must make up his mind to give a little more serious attention and labor to the task than evidently he has brought to the task.

STITT: "TROPICAL DISEASES"

The Diagnostics and Treatment of Tropical Diseases. By E. R. Stitt, A. B., M. D. With 86 illustrations. Philadelphia: P. Blakiston's Son & Co. 1914. Price \$2.00.

The policy of territorial expansion into which the United States has been forced in the last twenty years or so, and more especially during and since the Spanish War, has stimulated medical interest in this country in the diseases peculiar to tropical climates, and produced a school of investigators here which bids fair to rival the London School of Tropical Medicine. And when we further consider, as the author of this book reminds us, that a knowledge of many of these diseases is just as important to the medical man in the southern states of the United States as for the physician in tropical colonial possessions, it will be realized that there is more of a real, practical side to tropical medicine than we in the north as a rule are prepared to admit.

Of the group of able investigators of tropical diseases that has arisen in this country, Doctor Stitt, who heads the department of tropical medicine of the U. S. Naval Medical School, easily stands in the first rank; and his book easily may stand as a standard exponent of the subject. The chief feature of the book is the presentation, in Part II, of the clinical side of tropical medicine from a standpoint of the signs and symptoms of the diseases which are connected with anatomical or clinical groupings, rather than from the side of the individual disease. In another chapter, the diagnostic points to be obtained from a study of the temperature-chart are given, while in still another chapter the neurological manifestations that may be noted in various tropical diseases are presented.

In fact, it may be said, the whole tenor of the book is clinical; the author has aimed to

set before us his methods of teaching the subject from the clinical rather than from the laboratory standpoint, while he has so cross-referenced the work that the reader has the subject presented to him from every imaginable angle.

"REFERENCE HANDBOOK OF MEDICAL SCIENCES"

Reference Handbook of the Medical Sciences. Edited by Thomas Lathrop Stedman, A. M., M. D. Third edition, completely revised and rewritten. Complete in 8 volumes. Volume IV. New York: William Wood & Co. 1914. Price, per volume, \$7.00.

The fourth volume of this ably edited work has rather a large alphabetical range, from "Emb-" to "Hay-," which at once will indicate to the reader the inclusion of some very important subjects, notably the eye, the fetus, food, the foot, fractures, the genital organs, the glands, and gestation. All of these subjects are treated with the comprehensiveness and discrimination that we have become accustomed to look for under Stedman's editorship; and the intervening topics receive their proper proportion and degree of attention. It is a splendid work splendidly accomplished, and we find ourselves marveling more and more each time we take up a fresh volume at the courage and the ability displayed in the undertaking and achievement of such a colossal task.

WRIGHT AND SMITH: "NOSE AND THROAT"

Textbook of Diseases of the Nose and Throat. By Jonathan Wright, M. D., and Harmon Smith, M. D. With 313 engravings and 14 plates. Philadelphia and New York: Lea & Febiger. 1914. Price \$5.00.

As might be inferred from the connection of Prof. Jonathan Wright, of the New York Post-Graduate School, with this book, as its senior joint author, its exceptional feature is, the emphasis which it lays upon the etiology and pathology of the diseases whereof it treats. It essays to deal with nasal, pharyngeal, and laryngeal morbid processes from this standpoint, which, of course, involves a rather extended consideration of histology and physiology, and even of biology. This, as everybody knows, is where Doctor Wright shines. Biological pathology is "his middle

name." Much of the work in etiology and pathology contained in the work, we are assured, rests upon original investigation pursued for years in the laboratory and clinic by one of the authors (meaning Wright, no doubt).

However, while no apology is made for the more than usual space devoted to this aspect of the subject, symptomatology and diagnosis have not been neglected; on the contrary, the topical and operative aspects of diseases of the upper air-passages are dealt with in a manner just as thorough and masterly as that which characterizes the rest of the book. Several excellent colored plates show clearly certain diagnostic and pathologic conditions. But, in the end, we must agree with the authors' own estimate of the work, namely, that it is in the phases of etiology and pathology that it rises superior to other contemporary works on the ear, nose, and throat.

MOYNIHAN: "ABDOMINAL OPERATIONS"

Abdominal Operations. By Sir Berkeley Moynihan, M. S. Third edition, revised and enlarged. In 2 volumes. With 371 illustrations, 5 in colors. Philadelphia and London: The W. B. Saunders Company. 1914. Price \$10.00.

Doctor Moynihan is probably the ablest exponent of abdominal surgery among modern English surgeons. Indeed, in many respects, one may regard a book on the subject from his pen as an author's description of his own invention; for, many of the features of modern abdominal surgery, both in principle and in technic, are the products of Doctor Moynihan's keen brain and facile scalpel.

The third edition comes to us almost in the character of an entirely new work. The second edition had long been out of print, and so many innovations have occurred since that was written as to make a complete rewriting imperative. A significant feature of the present edition is, the debt of gratitude which the author cordially expresses to the surgeons of America, mentioning especially, by name, the brothers Mayo, John B. Murphy, and George W. Crile; thus indicating the invaluable part played by these four men of our own country in the progress of abdominal surgery.

Only those operations which are common to both sexes are included in this work; no gynecological operations are described. The

presswork, illustrations, and binding are in Saunders' best style, and the cuts are most illuminating and helpful. A small section—very small—is devoted to gunshot wounds of the stomach. Doubtless, if the book were to be written now, the author would considerably enlarge this chapter; so, it is just as well that he finished it before the world-war broke out.

DOCTOR BUTLER'S NEW BOOK: "THE
TRAVAIL OF A SOUL"

If you have—and of course you have, for one man is very like another—if you have experienced the deep longing and painful struggling of the soul, in its bondage of moiling and of petty carking cares, after some unattainable ideal of loveliness; if you have oved among the hardships and the common-places of life with a hidden vision in your soul, which "never passes into nothingness, but still keeps a bower quiet for you, full of sweet dreams, and health, and quiet beauty"; then your pulses will quicken and your secret spirit will respond to the profound and beautiful touches with which the author of "The Travail of a Soul" reaches and interprets your inmost heart.

In a sense, of course, the beauty of the lyric is the beauty of sadness. That is inevitable. "Our sweetest songs are those that tell of saddest thought." But it is not a poignant sadness. Neither is it the sadness of morbidity; far less of gloom and hopelessness. It is the sadness of the inaccessible—of longing and striving and disappointment, of passion unrequited, but unquenched, of hope baffled but not extinguished, of ideals missed but not surrendered—in a word, the exquisite sadness of life itself. It is, in fact, the inner drama of a soul; and, as with all strong, true souls, underneath the haunting minor refrain there is a singing major strain—a figure which I am well aware is a little anomalous as applied to technical music, but

which quite correctly exemplifies that strange symphony called life.

"The Travail of a Soul" is a beautiful work, beautifully done. Did I not say, when I spoke prospectively of it last month that it was Butler at his best? Let me confess, frankly, that I who have known Doctor Butler for years, and have known (or thought I knew) all the power and charm of his poesy, was taken by surprise with this supreme production. It is such a work as one might gladly achieve and die—not that I am at all anxious for Doctor Butler to die yet awhile.

The introductory apostrophe to Venus de Milo is a sheer classic, nothing less. Again I confess that I did not know the author was capable of such an effort; and I thought I knew something of his capacity, too. I will further confess, however, that in the text of the lyric itself (one hardly knows whether to call it a lyric or an epic—it is lyric in its beauty, epic in its dramatization of the inner life) I find the most profound and sympathetic appeal to my intimate heart.

You must have the book, doctor. If you have any sense at all of the beauty and pathos of your own secret, inner strivings after peace and joy, you must have the book and read it. You made a great mistake if you did not subscribe at the first call. I understand there are still a few available, so that you can still secure one if you act promptly. The subscription list is, of course, closed, and the price of the book is now \$3.00. But if it were ten times the price, it would be worth it. Suppose you were able to get a masterpiece of painting for \$3.00! I warrant you will get more joy and inspiration out of this master-piece of literature than you would out of the painting. I shall be greatly deceived in the CLINICAL MEDICINE family if there is not an immediate demand for the remaining copies—and you will be losers if you fail to get them. Send your check without delay to Doctor Butler, at Mudlavia, Indiana.



Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6072.—“A Perambulating Parasite: Larva Migrans.” C. L. R., Oklahoma, presents a most peculiar case, which he requests us to unravel. Three months ago, a woman of forty-five, living in the country, consulted him for a lump, she had on her jaw, and swollen eyes. Since that time, this “lump” and the swelling have been moving around to various locations. The patient said she could tell from the pain where the nodule would locate when it began to move. “In three days’ time, for instance,” the Doctor states, “it would move from the face, down the neck, across the shoulder and down the back, across the back, and eventually settle on the thigh. So, a few days prior to this letter, it changed from one shoulder to the other, then down to the breast, where the woman applied some ‘drawing salve.’ Then, in a few hours, she noticed a white spot in the center of the bump. This she squeezed, whereupon a small worm (which the Doctor mailed us for identification) came out. It had about the diameter of the lead in a pencil and was 1-4 to 1-2 inch long.” (Being now dried up, it is not nearly as large, of course.) “The woman still is bothered with this kind of worm,” the letter runs, “boring around from place to place. I presume it travels between the skin and muscle, through the superficial fasciæ.” Interpretation and treatment are wanted.

A bacteriologist, to whom the specimen was submitted, considered the “worm” to be the larva of a fly usually found in apples or nuts, and he pronounced it an impossibility for it either to enter the tissues, and much less to move around therein. However, careful consideration of the fact submitted led the present writer to make a more minute examination, and, although the specimen was in bad condition, it revealed, upon treatment with a weak potassium-hydrate solution, all the characteristics of the larva of the botfly, or

oestreus (genus gastrophilus); there being ten segments and hooklets, with (at the head end, apparently) two suckers. Hence, it probably is the larva migrans of Crocker, the parasite responsible for the so-called “creeping eruption” described by Lee, Kaposi, and others. This malady is comparatively common in southern Russia, while during the last ten years several cases have been recorded in this country.

The starting-point of this invasion naturally is on parts of the body most exposed to attack by the fly. Very exceptionally more than one such parasite is present; in a few cases, three or more having been reported. Always, however, the “burrow” has been easily distinguishable and is about 1-8 to 1-6 of an inch in diameter, perceptibly raised and of a pale-pink or reddish color. Still, in none of the cases reported has the parasite migrated “from one part of the body to another” or traversed any great extent of tissue.

You are familiar, of course, with the fact that the screw-worm fly (*chrysomya macellaria*) and the warble-fly (*hypoderma lineata*) commonly deposit their eggs in cuts, sores, nostrils or other body orifices of animals, and that in Texas and other parts of the country where large flocks of sheep are pastured humans not infrequently are infected. However, the screwworm and the larva of the warble-fly cannot possibly move from one part of the body to another. The eggs hatch in a few hours and the larvæ (or “maggots”) burrow in the adjacent flesh for from four to six days and then, if not destroyed, leave the wound, in order to crawl into the earth, where they pass into the quiescent pupal state. Every country physician is familiar with the grubs, bots, and so on, found under the skin of the backs of cattle.

Clearly, it would be quite impossible for any parasite to proceed in three days’ time from “the face down the neck, and proceeding

onward down to the thigh," or to "work from one shoulder to the other and thence down to the breast," there coming to the surface upon the application of a "drawing ointment."

If the "worm" sent us really was expressed from a spot on the breast, you may rest assured that the initial lesion was in that immediate vicinity, and as this is (at least usually) one of the least exposed parts of the body, it seems very unlikely that an egg could have been deposited there.

Stelwagon says, "the larvæ of both the families of the muscidæ and the æstridæ occasionally invade the human skin. The eggs of the former are deposited, usually, in open sores and ulcers; of the latter, in the skin through a puncture made by the insect, most frequently on an exposed part. Here, the larvæ develop and give rise to a furuncle-like tumor. These formations generally have a central aperture through which a seropurulent or sanguinopurulent fluid exudes. In some cases, as a result of burrowing of the worm, an irregular line of a purplish or reddish color, resembling an inflamed lymphatic, is produced. In extremely rare cases, considerable surface may be traversed by the larvæ before final suppurative action is excited, and a puslike tumor form, from which the worm is pressed out or extracted."

Of course, it would be impossible for your patient to decide just where the migrating larva would come to the surface, while, as we have pointed out, their track would be clearly indicated.

It remains to discover whether your patient really does harbor larvæ of any kind. It is particularly desirable that any induration the woman may have be opened and the contents expressed and forwarded for thorough examination. It would be well to investigate carefully all her movements during the past few months; above all, whether she was in any way particularly exposed three months ago, the time the swelling first appeared on the jaw.

In closing, we would call attention to the *possibility* of a multiple invasion; that is, that one egg may have been laid under the skin of the face (the site of the first swelling) and another under the skin of the breast, in which locality the larva forwarded is supposed to have been expressed. The larva in the face may have failed to reach maturity or may have been expelled without being noticed, and some time later the breast lesion may have formed.

All these things are possible, but the migra-

tion of a single larva from one part of the body to a *distant* area must be absolutely negated—one should think. We trust you will favor us with further and, if possible, more definite information.

QUERY 6073.—"Effect of Vaseline and Glycerin Upon the Hair. Shampoos." M. G. R., Ontario, submits the following question: "Is common vaseline a good thing to apply to the scalp as a hair tonic? The hair appears to get very dry in a day or so after an application of vaseline. Has vaseline an astringent or a drying effect. If so, would it be good for a scalp which is too oily, and contraindicated where a tendency to dryness is present? Vaseline has become so common a base for different applications and is so frequently used as a scalp rub that we should know something definite about it. If it does stimulate the growth of hair, we should use it, but then we should avoid it as a base when applying remedies on the face and exposed parts of the arms lest we produce work for the electric needle. One author states that, as vaseline is a mineral product, it should not be applied to the scalp. Does goose-grease stimulate the growth of hair?"

"What about glycerin as a base for preparations designed to aid the growth of hair? Glycerin is recommended by one author as being very much superior to vaseline, vegetable oils and greases or, in fact, anything else. He states that when the hair is dry and brittle a few drops of glycerin will moisten it and render it soft and silky. That, moreover, it is cleanly, being readily washed away with water alone. He states that as a dressing for the hair it is incomparably superior to anything ever used for that purpose. If glycerin is good for the scalp, could it be used both in dry and in excessively oily conditions?"

"Please give detailed formulas for a good egg shampoo. I bought, in a glass tumbler (about 10 ounces), what is called egg shampoo, for 16 2-3 cents at wholesale. This is a whitish substance of about the consistency of thick soft soap and having an odor resembling a good quality of soap chips. It cleanses the scalp and leaves the hair nice and fluffy. As this is 'common drugstore stuff' (without the formula) and, as I have no faith whatever in most things from this source, I ask for something I can compound myself. Also give formula for 'dry shampoo,' for use by invalids having oily hair.

"Also give the best treatment (with detailed formulas) for face bleaching, stating price of the best illustrated book containing

formulas and treatment for all hair troubles, including removal of superfluous hair. Also book (illustrated) on manicuring, and cosmetics."

Vaseline, as you are aware, is not absorbed by the skin, but is an excellent application to dry hair. A pure product has neither an astringent nor drying effect, and, therefore, should not be applied to an already oily scalp. Vaseline is used so commonly as a base for ointments, and so on, because of its permanency, freedom from odor and liability to become rancid.

Crude vaseline (unguentum petrolei) may exert a slightly irritant effect, especially upon the sensitive skin of the face, and thus stimulate somewhat the growth of lanugo. As it is not absorbed, however, it cannot possibly exert a direct tonic influence upon the hair-follicles of the scalp. The friction accompanying a thorough rubbing in of vaseline would, of course, increase the supply of blood to the parts and thus, theoretically at least, improve the growth of the hair. We are inclined to agree with the author, who states that vaseline should not be used as a remedial agent in diseases of the scalp. Animal- or vegetable-oils are decidedly preferable, but it should be remembered that they must be carefully removed every few days, to prevent the unabsorbed portions from becoming rancid and acrid.

Glycerin, under certain conditions, may advantageously be applied to the scalp and where the hair is dry or inclined to fall out; a small quantity being applied every two or three days, not alone to the scalp, but to the hair itself, by means of a fairly fine comb. This writer adopts the following procedure:

The scalp is thoroughly washed, preferably with a tar soap. The hair then is rinsed thoroughly with plain warm water and dried. With the finger-tips, a small quantity of glycerin is rubbed into the scalp, then a comb moistened with glycerin is passed gently through the hair several times. A very few drops, thus used, will suffice for even the heaviest growth of hair. As you have pointed out, one good point is that glycerin is readily removed by washing with plain water.

It is unnecessary to point out that the application of a substance which proves beneficial in one case may be useless or even injurious in another.

You will find a very exhaustive chapter on alopecia and other diseases of the hair and scalp in Stelwagon's "Diseases of the Skin," where also some excellent formulas are given.

Vaseline alone is rarely recommended as a base, though this and lanolin in combination are frequently employed.

Lassar recommends for alopecia furfuracea thorough washing of the scalp with tar soap, rinsing, drying, and the application of a lotion consisting of 3 grains of corrosive sublimate, 2 ounces of alcohol, and 5 drams each of glycerin and deodorized alcohol. The scalp is then dried and an alcoholic solution of naphthol, 1 percent, lightly brushed in, followed by a few drops of carbolized oil. This treatment doubtless will prove efficacious, but this writer questions whether the average American would approve of it.

One of the most satisfactory shampoos one can use consists of tincture of green soap containing 5 or 10 grains of resorcin to each ounce.

Most of the so-called "egg shampoos" on the market do not contain egg at all, which accounts for the reduced number of these preparations offered since the passage of the Pure Food and Drug Act.

An excellent shampoo cream is prepared as follows:

White Castile soap.....	ozs. 8
Potassium carbonate.....	ozs. 2
Water.....	ozs. 12
Glycerin.....	ozs. 4
Oil of lavender.....	gtt. 10
Oil of bergamot.....	gtt. 20

Shave the soap in thin slices, melt with the water on a water-bath, add the potassium carbonate, and stir until dissolved; allow to become nearly cold, then stir in the glycerin and oils. If too thick, more water may be added. If a clear cream is desired, substitute a transparent soap for the white castile. If you are willing to take the chance, add the well-beaten white of one or two eggs when the mixture has become cool enough to prevent coagulation of the albumen.

This cream can be placed on the market in clear glass jars holding from 2 to 4 ounces, according to the price at which it is to be sold. Pour it into the jars after it has cooled.

Another shampoo cream, one that is almost transparent, may be prepared as follows:

Coconut-oil.....	ozs. 6
Cottonseed-oil.....	oz. 1
Caustic potash.....	drs. 14
Water.....	enough

The oils are heated to 175° F., then half of the caustic potash is dissolved in 4 ounces of water and added slowly, with constant stirring. As the mixture thickens, add the remainder of the caustic potash dissolved in 8 ounces of water. Add very gradually, and

heat so that the mixture boils gently. Remove the scum as fast as it arises, and continue until the mixture forms a thick cream on cooling. Oil of lavender and oil of bergamot, or any other perfume, may be added. These must be added after the boiling has been completed and the mixture removed from the fire. Egg-white may be added as in the preceding formula.

It is probable that the egg shampoo you bought was of similar composition.

Almond-meal undoubtedly is the best material for shampooing extremely oily hair.

We are sorry to say that we are unable to give detailed formulas or to outline the best method of face bleaching. So far as we are aware, most of the face-bleaches marketed contain corrosive sublimate as the principal ingredient. Here is a typical formula:

Mercury bichloride.....	gr. 1
Emulsion of bitter almond.....	ozs. 12
Tincture of benzoin.....	dr. 1

The mercury bichloride is dissolved in the emulsion and the solution gradually added to the tincture. The preparation does not keep well and should be marketed in small opaque vials, with a shake-label. Other bleaches contain from 1-2 to 1 grain of corrosive sublimate to the fluid ounce.

You will find all the formulas you desire in "The Modern Formulary," by W. L. Cummings (price \$1.50); "Secrets of Specialists," by Covey; "The Standard Formulary" (G. P. Engelhart & Co., Chicago); and "Fenners' Formulary." The latter is a most excellent and exhaustive work, containing about 1000 pages; the price is \$6.00. Joseph's "Handbook of Cosmetics" (\$1.00) may meet your requirements. We would also call your attention to the series of articles on "Cosmetic Surgery" by R. St. John Perry, now appearing in CLINICAL MEDICINE.

QUERY 6074.—"Silver Nitrate Cure for the Smoking-Habit." W. T. C., North Dakota, has a patient who wants to have silver nitrate used to cure him of the cigarette-habit, and our correspondent requests detailed information about this treatment.

It is being widely claimed that a 1- or 2-percent solution of silver nitrate used locally constitutes an effective treatment of the tobacco-habit. If for a time the mouth is regularly rinsed with this solution, tobacco becomes extremely objectionable, and we believe that a number of young men addicted to the use of cigarettes have been cured in this way. However, the solution must be

used to a purpose, but individuals who do not really earnestly desire to relinquish their tobacco, cigar or cigarette, will conveniently "forget" to rinse the mouth as often as should be, and, so, are not benefited.

In his own practice, this writer found it desirable to keep the mouth and fauces slightly dry for several days by means of atropine, and to instruct the patient, whenever he feels the desire to smoke or before he does smoke (he is bound to do so), to rinse his mouth with the silver solution mentioned. If thereafter he does "light up," he very soon will quit in disgust. If, in addition, an open bowel is maintained for a few days and the patient given a good bitter tonic, he should not find it difficult to stop smoking. Naturally, however, if after a few weeks' abstinence he starts to smoke again, the desire soon will become as strong as it was before.

In this connection, the answer to Query 5644, which recently appeared in CLINICAL MEDICINE, may be read with advantage.

QUERY 6075.—"Interesting Case of Major Hysteria." S. O. C., Pennsylvania, submits the following data and requests suggestions as to treatment. The patient is an unmarried woman of 22 years, who has had all the ordinary diseases of childhood, fourteen years ago had typhoid fever, and nine years ago had diphtheria. Her family history is good.

In January, 1914, the patient felt an itching on the upper lip and scratched it. Later, a sore formed, but after a week this healed. A few days after that, a feeling of numbness developed on the right side of the body, which progressed, so that by the tenth day she had lost all feeling on that side, including that side of the head, neck, trunk, and extremities. She did feel extreme heat and cold. There was no motor impairment, save a slight incoordination of the muscles. After six weeks of treatment, the patient gradually improved, until now she presents the following clinical picture.

The right side of the head is devoid of sensation and "feels like a board." Both pupils react to accommodation and light, but the patient speaks of a "feeling of weight" somewhere along the optic tract when she elevates the eyes, and it is referred to the occiput. The tongue deviates to the right side. The patella reflex on the right side is exaggerated. When the eyes are closed and the patient is standing erect, balance is maintained with difficulty and she is unable to place her index finger on the tip of the nose at the

first effort, but has to "feel for it." The entire right side of the body constantly feels cold. There is no muscular atrophy or motor impairment, the disturbance being only tactile and thermal. On the right side of the head, at a point corresponding to the Rolandic fissure, is an extremely "tender spot," the tenderness gradually fading away from this point. She complains of "fulness in the head" all the time and of a sense of weight in the region of that tender spot. The patient's memory is good; she does not recollect ever having had a blow on the head or a fall. There is no syphilis or tuberculosis in the family.

For five weeks, the head and the sides felt better following the administration of a saturated solution of potassium iodide and giving massage, but now she is losing ground again and complains of feeling about the same as she did when this treatment was instituted about six weeks ago.

No doubt, doctor, you remember the story of the old farmer who, when he saw the giraffe in the circus, turned to his son and said, "There ain't no such animal as that." The story applies to this case, because it would be impossible for any known organic lesion to produce the symptoms presented by this patient. As Uncle Hiram would put it: "There ain't no such disease." Consequently, we are convinced that you are dealing with a major hysteria, and that examination of the ocular fundus and tests of the visual field will prove the correctness of this assumption.

It is difficult, with our limited knowledge of conditions, to discuss the entire case intelligently; it is probable, however, that for some reason the sore which appeared on the young lady's lip was regarded as a particularly dangerous lesion. Diplomatic questioning as to her procedure previous to the appearance of this sore might elicit some enlightening information.

It is impossible to assume any other than a psychic connection between the sore and the chain of symptoms developing after its disappearance. We must regard the lesion on the lip either as psychically or as physically causative, or ignore it altogether. Physically causative of numbness on the right side of the body, and all the rest, the wound could not be. However, psychically causative, if we assume that the young woman believed it to be something it was not, it might have been; and a major hysteria based on this fact might present all the remarkable conditions you describe.

It is more than probable that a brilliant cure can be obtained in this case by the use of strong suggestion and the application of the faradic or high-frequency current. Thus, for instance, after a thorough examination, you can assure her that at last you have discovered the cause of the trouble and can correct it very promptly by the application of proper electrical currents, that the peculiar sensations on the right side of her head will disappear under the application of electrodes, and other such like suggestion. Then apply one pole to the occiput and the other to the base of the spine. Use sufficiently strong current to be distinctly uncomfortable. If the suggestion has been sufficiently strong, probably you will find, upon the removal of the electrodes, that the symptoms have disappeared. At the next sitting you can remove another disability, and, so on until normal conditions are reestablished.

It would be well of course during this period to eliminate thoroughly and to administer the triple arsenates with nuclein or the trivalerates. Lecithin might prove beneficial.

In this connection, we would call your attention to the very exhaustive discussion of hysteria in Church's translation of Salinger's "Diseases of the Nervous System," Modern Clinical Medicine Series, published by Appleton.

You should have no difficulty (if our diagnosis is correct) in discovering the hysterical zones; and as such we regard the tender spot on the right side of her head.

It might be well to make a very thorough examination of the patient's pelvic organs. And, we repeat, if at all possible get the young woman's full confidence and find out something about occurrences immediately prior to the appearance of the sore on the lip. We are particularly interested in this case, doctor, and trust you will keep us fully informed.

QUERY 6076.—"Gallstones Made to Order." J. D., Illinois, and several other correspondents have sent in concretions, that are supposed to be "gallstones," voided by their patients after taking certain advertised nostrums guaranteed to "cure" cholelithiasis. One physician wants to know why, if the "quack" can remove gallstones by hundreds with infinite ease, the profession impotently continues to advise operation. Another, more astute, questions whether the "greasy masses" really are gallstones, and continues: "I find that everyone who passes these bodies has been filled up with olive-oil and purged

with epsom salt. Further, I observe that the supposititious gallstones are merely greenish soapy masses, entirely unlike the real thing removed by the surgeon."

All the specimens submitted were found to be of the same character, namely, bile-stained masses of soap and fatty acids. The quack and exploiter of patent medicines always revels in the spectacular, and here he has taken full advantage of the fact that large doses of oil invariably cause the dejection of such hard masses, which, naturally, by laymen are supposed to be gallstones.

Fruitola and similar nostrums have been analyzed and are known to be flavored olive-oil. The purgative powders accompanying the nostrum are either seidlitz powders or rochelle salt disguised by the addition of compound licorice powder. The so-called gallstones voided generally are of a grayish-green color and of the consistency of soft wax, but on standing for several days they separate into a dark oil and an amorphous gray substance. Analysis shows these concretions to consist of a mixture of fatty acids and soaps, produced by the action of the intestinal fluids upon the large quantities of oil ingested.

We suggest that our correspondents procure from the American Medical Association (535 Dearborn Street, Chicago) a copy of "Nostrums and Quackery" and read to their patients or show them the exposure of these nostrums, as found on pages 437 to 443.

QUERY 6077.—"Sequels of Yellow-Fever." M. L. W., Kentucky, writes: "What sequels would be likely to follow a severe attack of yellow-fever? My books on practice are silent on this phase. I am treating a patient who had an attack while serving in the navy and now wants a pension. He is afflicted with constipation, indigestion, loss of memory, and other troubles, but I cannot find out whether these are the usual consequences."

We must confess that the somewhat extensive literature at our disposal also does not

treat with any degree of definiteness of the possible sequels of the disease in question. There is this to say, though, those victims who recover ordinarily are those seen and treated early in the attack. Cases of continued fever and in which there is no distinct remission by the third or fourth day usually terminate fatally regardless of treatment. In the more severe types, there remains little time for action, and from the very beginning signs point plainly to their fatal termination.

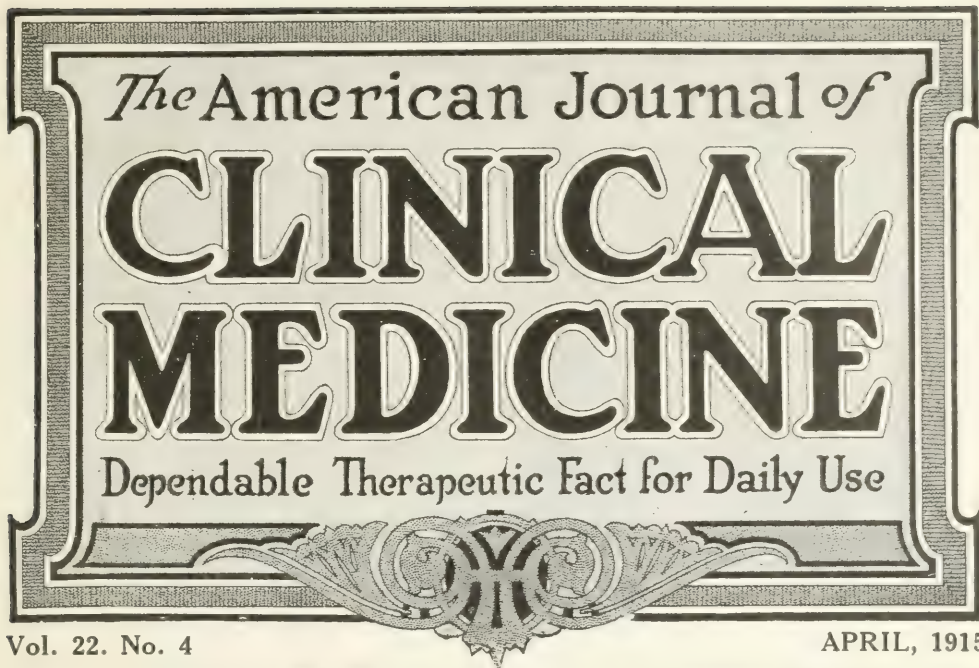
The anatomical lesions resultant from an intense intoxication are of such a degree of severity as soon to be beyond repair, hepatic degeneration being as intense and general as in cases of acute yellow atrophy or of phosphorus-poisoning. In addition, the kidneys may be the seat of a marked parenchymatous nephritis.

From these considerations, it is quite evident that patients recovering from a prolonged attack of yellow-fever may suffer from renal, hepatic or hematinic disorders. Moreover, it must not be forgotten that not infrequently a malarial infection coexists with the disease. Guiteras, Agramonte, and other writers state that they have observed the malarial parasite quite often in the blood of yellow-fever patients; not infrequently that complication materially retards recovery. However, as we know, in ordinary cases, when promptly and properly treated, the period of convalescence is extremely short, it being not unusual to see men about their daily work two weeks after the initial chill.

In protracted cases, especially if patients have been profoundly debilitated, more or less disability may exist for months. Each case, however, must be considered and treated on its own merits; but, as a rule, regulation of the diet and the prescribing of tonics prove sufficient to insure ultimate recovery.

Where renal and hepatic lesions are severe, death generally occurs within a few months, the causes mostly mentioned being atrophy of the liver (chronic hepatitis), parenchymatous nephritis or progressive anemia.





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Dentistry and Medicine Drawing Closer Together

WHILE it is true that dentistry was born outside the ancestry of medicine, yet, as a modern science, it could not avoid affiliation with and adoption into the family of medical sciences; and it was, indeed, under this prestige and these auspices that it has established its claim as an independent professional vocation.

The hour has now well-nigh arrived, if it has not already struck, for the breaking down of all artificial barriers, and the consummation of a complete kinship between the two. So much of the life-blood of medicine has, in the past few years, flowed into dentistry, and so much of the vital essence of dentistry has been incorporated into medicine, that the relationship between them may now be regarded as a blood relationship. Never was the time more propitious for the cultivation of a broad science of stomatology, in which both medicine and dentistry should pool their respective interests; and never were both medical and dental professions more fertile for its cultivation.

The dental field, in particular, has undergone wonderful changes in this respect in the

last comparatively short period of time, almost within the last five or six years. The great modern doctrines of systemic infection, of autotoxosis, and of biologic pathology, have overshadowed the purely mechanical viewpoint which for a time threatened to stultify dentistry, and have led it out into the broader domains of etiology and prophylaxis. It no longer suffices the intelligent dentist to know the influence of defective teeth upon digestion; he seeks to know something about the influence of defective metabolism upon the teeth. Most of the dentists of the modern school are nowadays making use of physiologic laboratory and clinical diagnostics, such as the urine analysis, the Wassermann reaction, and the like, for an interpretation of dental conditions; and are reinforcing their local treatment of the teeth and mouth with internal, systemic remedies, and prophylactic measures.

A conspicuous example of this attitude of modern dentistry toward the etiologic and pathologic doctrines of modern medical science is seen in the recent investigations, conducted jointly by dentistry and medicine,

upon the subject of pyorrhea alveolaris. Curiously enough, this subject, which for many years has been the point upon which, of all others, medicine and dentistry have clashed, seems destined to be the very point upon which they will reunite. For several years medicine has been insisting upon the systemic character of pyorrhea, while dental pathologists have been advancing arguments to discount its systemic etiology—to establish its purely local entity, and bacterial origin. Now come Barrett and Smith, of the University of Pennsylvania, representing respectively the dental and the medical departments, and by a masterly series of research and experiment, demonstrate that pyorrhea is an amebiasis, due directly to entamebæ, to which, of course, the metabolic condition of the body contributes its etiological role; and this demonstration has been confirmed by further investigations by Bass and Johns in the Tulane University.

The significance of this denouement in the matter of pyorrhea is not merely that there is no longer any ground for dispute or differences between medicine and dentistry on this particular subject, but that it resulted from the joint constructive work of the two professions, and, most important or all, that it calls upon medicine and dentistry to join hands and merge their forces in a concerted and intelligent crusade against this widespread disease, both by prophylaxis and by cure, the way to which is fortunately pointed out by the same investigators who taught us the nature of the disease. And the still broader significance of it is that this particular instance is but typical of the trend of affairs all along the line, as between medicine and dentistry.

The truth is, that in the course of their steady advance, the lines of medicine and dentistry have drawn closer and closer together, until they are now in contact along the entire flank, and henceforth they must campaign as two wings of one army.

Abandoning all figures of speech, and speaking in plain language, the time has come for closer cooperation between the doctor and the dentist. There is no longer the sharply drawn line of distinction between them that there was formerly. Their work and their interests overlap at a thousand points. The dentist must from now on be more of a doctor, and the doctor must be more of a dentist, and both must be oral hygienists and prophylactors.

If doctors and dentists themselves do not realize this, the public does, and will force

them into cooperation. You cannot keep the public out of professional confidence any more; and it is a splendid thing, both for public and for profession, that you can't—just as fine a thing as the open Bible was in religion. The capital article on Pyorrhea recently published in the *Associated Sunday Magazine*, from the pen of Dr. Edwin F. Bowers, is an exemplification of the place the public occupies in relation to this and other medical movements.

But I am sure that the medical and dental professions do not need to be told of their duties and privileges by the public. They realize them and will meet them, as they have always done. Neither one of us, doctor nor dentist, can cope with the tasks before us alone. Each of us needs the other. We are, as I have intimated, wings of the same army, and, for the best results, must cooperate, consult together, hold up each other's hands, exchange each other's viewpoints, work side by side. The doctor must call the dentist in consultation, and the dentist the doctor; and both must take the public into their confidence.

Here is a big field for missionary and organization work, not on the basis of sentiment, but of genuine, practical, progressive efficiency.

To live! But just to live! No matter where;
 To hear and see; to breathe God's boundless air;
 To play in this great world an eager part;
 To feel the strange I AM throb in the heart.
 To live! 'T is something more than plod and grind;
 Life is a thing of spirit, soul and mind;
 The reaching out and on of growing powers,
 The change to higher forms of what is ours

—Mary E. Allbright.

BACK TO DRUGS AGAIN

The belief in witchcraft was universal. It was founded on theology, and buttressed by confessions of persons who knew they would be burned alive in consequence. The clearest evidence in the courts confirmed it, and such legal giants as Matthew Hale sentenced men in accordance. It was never disproved; but as the human mind developed and human knowledge and intelligence increased, the world finally arrived at the place where it refused to believe in the possibility of so monstrous a thing. This sentiment grew from the bottom up, until it permeated the world's thought.

The Northmen were passionately devoted to their martial creed, and their warlike gods.

Odin and Thor, exactly suited them; as did Valhalla, their conception of a desirable hereafter. Yet, despite their fierce opposition, the tender teachings of Jesus, the gospel of love, gradually supplanted their native cult.

Human thought does not move directly or uniformly, but imperceptibly, by waves, and with a pendulum swing to one side and the other. The austerity of the Commonwealth of Britain was followed by the debauchery of Charles II's era. In the fifteenth century, men demanded that all should think and believe alike; and they desolated the world in their endeavor to compel all to accept the creed of the sect that was in power in each country. So, the Romanist burned Huss, and Calvin burned Servetus. Now we have veered to a respect for the rights of the individual, as to creed and practice, that approaches closely to indifference.

The doctrine of states' rights reached its climax in secession. For half a century since then it has receded, until today the centralization has gotten to a point that would raise the spirit of Jefferson in wrathful protest, were such things possible.

The medieval conditions of drug-therapy were endured until endurance reached its limit, and the reaction was irresistible. The inefficacy, the uncertainty of the ancient drugging finally was realized and the whole mess cast overboard. For years the use of drugs has been a matter "for laughter, tears and jeers." The resort to surgery and other mechanical measures was in response to the universal demand for something definite, something swift and certain, to replace the old guesswork. So, the pendulum swung far to the right, far beyond the safe and sane center.

A few years ago, we saw that the limit of the pendulum's oscillation had been reached. The violence of the denunciation of drugs showed the beginning consciousness of opposition; just as the intolerant assertion that wheat must rise from \$1.65 to \$2.00 indicates that it is time to sell. Evidences of a reaction were manifest. CLINICAL MEDICINE announced the coming renaissance of drug-medication.

But time was necessary. The sober common sense of men told them that the absolute proscription of drugs was a mistake; however, this required time to permeate the consciousness of the profession. Besides, the faults of the old materia medica were too glaring, and they still existed. We could not go back to that mess. The greed of foreign novelty exploiters and of nostrum devisers,

foreign and native, had also been pushed to the point of exciting disgust. The medical profession stood ready to return to drugs, only they must be drugs worth while.

The key to the situation has been furnished by emetine. The brilliancy of its triumphs dazzles our eyes. We stand amazed to think that all these centuries we have held in our armories so powerful a weapon without comprehending its possibilities. And not the least of our wonderment is, that ipecac should have been originally introduced, five hundred years ago, as a remedy for exactly the malady in which its present triumph is made—dysentery. Yet, possessing this perfect means of control over that disease, we have permitted ourselves to go so far in the surgical path as to contemplate opening the abdomen and incising the bowel, so as to permit of irrigation.

Straight home to everyone of us come the two obvious deductions: there must be similar inestimable qualities inhering in other medicinal plants, and the observations of the older, prelaboratory practitioners are the place to look for probable uses of these remedies. Already the older works on therapeutics are spoken of as probable mines of rich gems.

Most fortunately, we have at our hand the means of pursuing this investigation. The works of the alkaloidists give us an array of weapons of the finest temper, ready to apply. These afford the opportunity to strike swiftly and surely as with the surgeon's knife. Among the numerous advantages of this therapy, may be enumerated the following:

The remedies are absolutely uniform and certain; every dose acting precisely like any other dose of the same medicine, in quantity and quality of potentiality.

The action of the alkaloids has been studied scientifically, the experimenters having been driven from the galenics to the active principles in order to enable them to do their work at all. For years, we have been asking why we could not have the same precision in practice that they demanded in experimenting. Why, indeed?

The action of these principles is swiftly developed, and precious time often is saved thereby. Every physician accustomed to their use will claim possibilities from his treatment that the other practitioners will not allow as being possible.

The active principles are absolutely free from commercial control. There is with them none of the greedy extortion of the patented-chemical vendor, the conscienceless urging of the remedy for everything to which

humanity is liable. Every pharmacist is free to prepare and vend every alkaloid and glucoside mentioned in the Dispensatory. If any one of these gentlemen has a preference over his fellows, it is simply that he has, by good work, established a reputation for his goods—and, surely, that is no drawback. Any other may do the same, if he will. We may prefer any man's goods if he makes them preferable—and we ourselves are the sole judges, not he. If any of these alkaloids comes into general use, the Pharmacopeia may adopt it and prescribe the legally binding properties, to which any manufacturer must conform. The ethical standing of the alkaloids is impeccable.

There is this radical difference between the old and the new therapeutic agencies, namely, the latter are applicable to conditions rather than to diseases. Even though emetine has proved itself as a specific against the amebas, this will prove exceptional—the active principle acts by and through the vital processes and is evaluated by its power of influencing these toward physiologic equilibrium. This again necessitates a definite conception, or the part of the physician, of the derangement of physiologic function—and this is the first and principal objection brought against the use of the alkaloids. They demand a knowledge of physiology and its pathologic derangements far beyond the capacity of the ordinary practitioner. He is fairly qualified to recognize smallpox, and to differentiate it from measles and scarlatina; but to peer into the human body and determine exactly the function that is deranged, as the watchmaker peers into the little mechanism and detects a speck of dust among its wheels, that is too much to ask.

To this, we answer briefly, Bosh! The average, nonspecializing, American doctor knows far more than he is credited with. He possesses exactly the knowledge needed here, and is, in fact, better prepared to recognize derangements of physiologic function than to denominate diseases correctly, that is, nosologically. Very often, it is true, he does not know that he knows these things—he is not accustomed to have the questions put at him in this way. He is like the candidate who failed to describe morbilli, when he could have given a vivid description of measles.

Another objection we now hear is, that, if the alkaloids are so very valuable, why is it that the discovery of their values is left to "outsiders," nonalkaloidists? Why have not the men who have devoted themselves to the study and exploitation of the active prin-

ciples made their mark, as has Rogers with emetine?

When we hear that, you may hear our smile clear across Chicago's length of twenty-five miles. There is extant a large library of alkaloidal literature, comprising such authorities as Burggraeve, Castro, Van Renterghem, Laura, besides an army of others, scarcely less luminaries. And are not the many, many "gems of purest ray serene" dug from these mines, polished and reset, and presented in the two great textbooks on "Therapeutics" and "Practice"? Go to, brothers! Get busy and climb into the wagon before it passes you by.

As to emetine, it was only after the ameboid and bacillar forms of dysentery had been separated that Rogers could demonstrate the value of this alkaloid. Still, you may find plenty of other values related anent this active principle in the works mentioned; and they are well worth your investigation. And also about lobeline, gelseminine, solanine, cicutine, brucine, and many more.

Remember that there are several roads, as many as there are people, all leading toward the light. No two go just the same. Some make cross-cuts, others go round-about, and it takes longer, but all eventually reach the same goal. If one's actions displease, simply know that he is going another road than yours, just as good a road, and just as near, perhaps, but another one. You will meet and smile at the end of the journey, and at cross-roads along the way.—Susanna Cocroft.

HOSPITAL NEGLECT: A CONCRETE ILLUSTRATION

A few months ago we printed here a general criticism of the shiftless and inefficient way in which most of our hospitals—even our best-reputed ones—are conducted and insisted upon the crying need of reform in this direction. A specific case has recently come to our attention which so pertinently and powerfully points our moral, that we feel constrained to relate it. No names will be mentioned, either of the hospital involved or of any of the persons who were parties to the occurrence, as it is not our purpose to enter a direct accusation against any institution or to raise a personal controversy; our aim merely is, to drive home, by a specific instance, the general lesson which we conveyed in our former editorial. The reader must take our word that the incident here to be related is an actual happening, to which we add nothing and from which we take nothing away.

An old physician, a good friend of ours, living in the middle west, had a daughter who was a trained nurse and was in the employ of the health department of the city in which she resided. This young woman was taken sick with some affection of the throat, which, judging from all accounts, appears to have been a suppurative tonsillitis; however, the precise nature of the trouble is an immaterial detail.

Being a graduate of the training school of one of the largest and most influential hospitals in her city, this nurse went to one of the head surgeons of that institution for diagnosis and treatment. This gentleman advised her to enter the hospital as a patient, at the same time instructing his assistant—also a surgeon of some attainment—to go and attend her. The sick girl did as told. The assistant, it seems, was very busy; at any rate, he was a “surgeon,” and, from all he could gather, this was not a “surgical” case; consequently, he delegated the care of the case to another man. As a final result, for ordinary care, the patient finally fell into the hands of a hospital interne.

The hospital, by a similar process of deputation, did not even put a trained nurse in charge of the case, but left the patient in the hands of a green, inexperienced cadet. So it was that the sick woman, who had gone to this hospital (and the school of which she was a graduate) for the express reason that there, as she naturally and by right supposed, she would have a guarantee of care and professional skill which she could not have at her home, found herself committed to the tender mercies of a young, untutored interne and an equally unsophisticated cadet nurse.

The result is hardly to be wondered at. The abscess in the patient’s throat continued to increase, but little was done to relieve it; neither nurse nor interne, when they could be induced to visit the bed, recognized the gravity of the condition or saw any cause for alarm.

Only when this poor young woman actually was choking to death was it thought worth while to call adequate medical and surgical help. Even then no surgical intervention was undertaken—not even the very obvious and simple expedient of a low tracheotomy—and the patient died. And her death was the result, so the young woman’s father believes, not of the natural, inevitable effects of her complaint, but of an inexcusable, easily preventable accident in a disease of itself relatively innocent. And that, in a large,

well-equipped hospital, supposed to guarantee the maximum safeguard against precisely this kind of *contretemps*.

As we have said, we are not pressing the interests of this particular case. The father of that unfortunate woman, who himself is a doctor and therefore understands and feels with special keenness the needlessness of his daughter’s death, naturally is extremely indignant and bitter toward this hospital and the physicians involved—as, indeed, he has good reason to be—and may yet institute proceedings against those implicated in this affair. Nobody will blame him greatly if he does; assuming his statement to be correct.

However, we repeat, intensely as we sympathize with our friend in his loss and in his indignation, it is not with the personal aspect of the matter that we are here concerned. It is not the particularity of this instance which gives it public significance, but the fact that such things are possible. Fortunately, such cases do not often result quite so seriously as did this one; but there is hardly a physician with hospital experience who has not encountered *some* of the results of hospital carelessness and neglect.

The instance we have related, in fact, furnishes a powerful exemplification of the very defects which in our previous article we pointed out in hospital administration. The features of hospital service which are supposed to constitute its superiority over home service—its organization, its equipment, its facilities, its continuity—are the very features which, when allowed to run to seed, constitute the danger and the false security of the hospital.

But these are exactly the features of hospital service that *are* being allowed to run to seed. The organization of the hospital is permitted to degenerate into a careless shifting of responsibility, from one to another, until the patient is hopelessly removed from direct responsibility altogether. The equipment and facilities of the institution come to stand for the mere shadow of efficiency and safety, instead of for the substance. And the much vaunted continuous watchfulness of the establishment lapses into the mere formal maintenance of a shift system of attendants, to satisfy the letter of the claim.

We repeat, the hospital, as an institution, is badly in need of reform; and it is the business of the medical profession to see that such reform is carried out. It is a matter in which the whole profession is responsible to the public. If we do not reform the hospital ourselves, the time will come—and will not

be long in coming, either—when the public will undertake the job for us.

The great thing in all education is to make our nervous system our ally instead of our enemy. It is to fund and capitalize our acquisitions, and live at ease upon the interest of the fund. For this, we must make automatic and habitual, as early as possible, as many useful actions as we can, and guard against the growing into ways that are likely to be disadvantageous to us, as we should guard against the plague.—William James.

NARCOTIC-LAW DEVELOPMENTS

Last month we told you that Commissioner Osborn, of the United States Bureau of Internal Revenue, had made the ruling that physicians who dispensed narcotic drugs while in their own office would be required to keep records thereof. Since the publication of this fact the Bureau has extended the record requirement to all dispensing or distribution of narcotics on the part of doctors, dentists or veterinarians, *with the single exception of such drugs as may be personally administered by doctors to patients.* The ruling reads as follows:

You are advised that for the purpose of checking up the quantity of drugs coming within the scope of the Harrison Antinarcotic Law, received and dispensed, this office deems it necessary for a record to be kept of all such drugs so dispensed or distributed in the office of the physician, dentist, or veterinary surgeon. A record must be kept also of these drugs left with a patient to be taken in the absence of a physician, dentist or veterinary surgeon. Only such drugs as are administered directly to the patient by the physician in person, when away from his office, are exempt from record.

This regulation will mean that records must be kept of 95 percent of all the narcotic drugs which the doctor may dispense. As a matter of fact, he may as well keep a record of everything, and in case of doubt we advise him to do so.

We wish to add, however, that while the Commissioner's ruling is undoubtedly made in good faith and presumably is based upon the Harrison Antinarcotic Law, as a matter of fact it is not the law, and we give it as our opinion, based upon good legal advice, that if this matter is brought into court, as eventually it is likely to be, his ruling will be set aside. The law distinctly says that the physician shall keep a record of such narcotic drugs dispensed or distributed "except such as may be dispensed or distributed to a patient upon whom such physician, dentist or veterinary surgeon shall personally attend."

I believe that any intelligent person reading these words will have difficulty in reading

into them any such interpretation as that afforded us by the Commissioner of Internal Revenue. The law says nothing about "visiting" a patient or calling to see a patient, nor does it intimate any restriction of the meaning of the words "attend upon." Also, anyone conversant with the history of the law and knowing the great care taken by those who drafted it to exclude any such meaning as that read into it by Commissioner Osborn must contend that he is mistaken. The discussion of this very section on the floor of the United States Senate bears out my contention.

Commissioner Osborn's ruling is not law. We wish to insist again upon this point, and we wish to state again our firm conviction that just as soon as a test case is made, his position will be reversed. Nevertheless, we advise every physician to obey to the letter the regulations laid down by the Treasury Department. The record-keeping requirement, while onerous, is bearable, since it does not interfere in any way with the physician's right to dispense his own drugs. Our fundamental objection is to the assumption that any government official has the right to read into any law a meaning which is not clearly expressed in the wording of the law itself.

TREATING EXOPHTHALMIC GOITER

The Texas State Medical Journal contains an interesting article by Dr. R. W. Baird on the medical treatment of exophthalmic goiter. In it, he speaks of the very indifferent treatment inflicted before the surgical era, but under which, nevertheless, patients were leaving the hospital decidedly bettered by their temporary stay. From this, he deduces the proper treatment to consist in prescribing rest, fresh air, and diet; naming these as essentials.

Rest must be mental, physical and nervous; and this includes emotional rest. Relaxation must be complete. The day and night should be regulated by hours, the manner of spending each period being specifically provided for. A tactful nurse helps.

Fresh air relieves headaches, promotes sleep, and aids in the assimilation of food. This is one of the reasons why the patient generally is better in warm weather, when much time may be spent in the open air.

The diet should be nutritious and appetizing. Baird speaks specifically of milk and eggs, as sometimes giving the best results and overcoming wasting, while preventing

intestinal toxemia. He might well have added the fruit-juices as aiding greatly in this respect. Limitation of nitrogenous articles is essential, but may be carried too far, and debility result. The lighter proteids should be preferred, especially fish and sea-foods in general. Many delicate patients can utilize oysters, clams, scallops, turtle, crabs, and crawfish who would suffer after a steak or a cutlet. Turkey is good, provided the tendency to overindulge is controlled. The quantity of all meat-foods should be carefully prescribed, and increased or diminished as the sequences are noted.

Milk is best taken warm from the cow, or warmed and salted to taste. It is to be eaten rather than drank, that each portion may be duly insalivated and digestion be well under way before the morsel leaves the mouth. Whole or top milk should be employed alone. Buttermilk, kumiss, kefir, matzoon, Devonshire cream, and very especially the Bulgarian-bacillus preparations are useful variants of a diet likely to become monotonous without any changes.

There is scarcely a limit to the number of ways in which eggs may be served, and a new one should be used each day. One of the most useful methods of resting is the care of chickens; while the satisfaction of having actually fresh-laid eggs counts for much.

To return to Doctor Baird. Diarrhea indicates profound toxemia, although constipation is not uncommon, and here toxemia is a matter of course. Mild laxatives are indicated. Light massage and hydrotherapy prevent muscular atrophy and give tone to the vasomotor system.

Bromides, and an ice-bag over the heart, aid in controlling its aberrance. Do not use cardinals, unless the indication for their employment is clear—they are not essential to exophthalmos, in itself. Cardiac weakness, tachycardia, increasing dulness, arrhythmia, or swelling ankles call for these remedies; and this, to Baird, means digitalis.

Early diagnosis is of great importance.

Then he proceeds to kick over the whole basket by adding that "in a majority of the cases medical treatment should be only preparatory to surgical treatment."

If the use of effective intestinal antiseptics were added, and care taken to forbid as closely as possible sexual excitement and indulgence, the results would be much less likely to justify this pessimistic conclusion. Few realize the degree to which fecal toxemia is responsible for exophthalmos, or the value of wise treatment persistently followed up.

And we fail to see how any intelligent physician can overlook entirely the splendid results obtained by Forchheimer, and by the numerous practitioners who have adopted his methods, through the use of quinine hydrobromide and ergotin in generous dosage.

However, we are far from criticizing or belittling this paper. We are too grateful for any evidence that any number of the profession feel disposed to listen to any suggestion for medical treatment. We have so long heard the cry, "No treatment but the surgical," that we welcome any evidence of relenting its rigidity.

An old English lord, visited by the son of a friend, tried to enter into conversation with him, but to each remark the young man would acquiesce by saying "Yes, yes," and no more. Finally the host, becoming disgusted, cried, "For God's sake, say 'No' once, so there be two of us!"

PROVIDING THE AMMUNITION

American physicians are feeling the pinch of the war in Europe. This is particularly true in the south, and to a lesser degree in the New England states and other industrial communities depending largely upon the sale of manufactured products. Physicians of the central west, where ready money comes from the sale of wheat, corn, hogs, and cattle, are doing very well indeed, thank you! However, that does not help our brethren to the east and south. Frankly speaking, many of them are hard up—mighty hard up! They need that essential ammunition for the great battle of life which all of us must have if we are to prosper in this world, and that is—*money*.

To the doctor, after all, money is one of the indispensables. He cannot live on good works alone. He cannot live because people love and respect him. He cannot live even in the consciousness of superior professional ability and skill. He must sell himself for money—and *get* the money—if life is really to spell success for him. Sounds sordid, does it? But it is true, and the sooner every one of us learns its truth, the happier we shall all be in the end.

The average doctor earns money enough; the trouble is, he doesn't get it. His patrons have gotten into the bad habit of taking it for granted that his pockets are lined with coin, and that, really, he doesn't need to be paid—at least only rarely! They have to pay the grocer, the tailor, and the undertaker. They have dimes for the nickel show and dollars

for the theater, but nothing—or but little—to defray the expense of bringing baby into the world.

This condition is dead wrong, and we want to change it if we can. In previous numbers of *CLINICAL MEDICINE* we have talked about this problem and besought our readers to help us. We know our big family appreciates these efforts, and it is our purpose to continue them, yet doubtless you all feel, as we do, that we have not yet found a solution to the problem. However, we shall keep on with this work, as you will see.

Read in this issue Mr. Gifford's fine paper upon "Why Doctors Fail." Think it over carefully, and then write to the editor and tell him some of your own money problems. These letters will be turned over to Mr. A. D. Brush, credit man for a large pharmaceutical manufacturing house, who has been studying this problem from the doctor's standpoint and who is anxious to give practical and concrete service to the profession. He wants to hear from just as many doctors as possible, with samples of their stationery, copies of the statements and bill forms which they use, a description of the bookkeeping method which they employ and of the plans which they have used with success, or without it, in the collection of their accounts. Tell your troubles to Mr. Brush, and in the May number of *CLINICAL MEDICINE* he will "start something" which I believe will be of the utmost practical value.

The paper which Mr. Brush will contribute—there may be several papers before he gets through with the subject—will, you can depend upon it, *get right down to brass tacks*. That's what you want, I know, so when you write him (and us) please be specific. The harder the nuts you have to crack, the more pleasure it will be for him to help you crack them.

If I stoop,

It is but for a time. I press God's lamp

Into a dark, tremendous sea of cloud

Close to my breast: its splendor, soon or late.

Will pierce the gloom; I shall emerge one day.

—Browning.

HUNT FOR THE DIAGNOSTIC DOLLARS

I have just come across an article by Dr. John N. E. Brown, published in *The Canadian Journal of Medicine and Surgery*, of March, 1915, in which a story is told of Dr. William J. Mayo, of Rochester, Minnesota, a story

which pleases me so much that I am going to reprint it herewith for your pleasure also. Please read it:

"You know," said Doctor Mayo "some of our bright young men will spend hours investigating a case and find a long list of signs and symptoms, and perhaps overlook the two great diagnostic points in the case, the mass under the liver and the colic. I know one of these young men, a graduate of an A 1 college, with a good training here. After looking around for a place to settle, he came to me to say that he believed he would go out to a certain locality. 'There's only old Doctor Smith there,' said he, 'an old fogey. He's twenty years behind the time; he can't do a blood count, a stomach analysis, or any of these new stunts. I believe that is the place to start.'

"The young man went to the place, and I learned that his pride was very much hurt on one occasion.

"After making a very careful examination he found a number of diagnostic pennies and nickels, but was uncertain what the real trouble was. The family getting anxious, called in old Doctor Smith, who, after a few moments, made a positive diagnosis on a couple of ten-dollar-bill diagnostic points, much to the dismay of the young man. Doctor Smith was trained to look for big things upon which the diagnosis of most diseases can be made.

"You know," Doctor Mayo went on, "there are everyday diseases and Sunday diseases. Give me the man who can make a diagnosis of an everyday disease. We sometimes find a man who can make a Sunday or holiday diagnosis, but who is an utter failure on the everyday diagnosis.

"Now take the subject of occult blood, for instance. We hear a great deal about occult blood. 'Occult blood'—you know what 'occult' means. You remember, years ago, when we were younger, occasionally Hermann, Keller, and other magicians used to come to town. You have seen them." As he said this, Doctor Mayo's twinkling gray eyes were turned inquiringly upward under his heavy eyebrows to the visiting doctors ranged on the observation stand.

"The town people all turned out. One of the stunts the magician did was this:

"He asked someone to lend him a top hat. Well, about the only fellow in the town who owned a top hat was the sheriff. (You know the sheriff is always a good fellow, he has to be a good fellow, a popular fellow, or he wouldn't be sheriff. And he wears a top hat.)

"Well, everybody looked at the sheriff, and they called out to him to lend his hat. So the sheriff, getting red in the face, handed up the hat.

"The magician took the hat, covered it with a cornucopia, and gave it a shake. He then put in his hand and pulled out a big bouquet of flowers. He put in his hand again and hauled out a rabbit. He then withdrew to the rear of the platform, stumbled and fell upon the hat, apparently accidentally, crushing it flat. Everybody laughed. The magician looked horrified at the damage he had done to the hat. But with a few magic movements he restored it to the sheriff as good as new.

"That is doing the occult; that is what occult means. So whenever I hear about occult blood, I think of Keller and the sheriff's hat.

"Our own laboratory diagnostician triumphantly reports that in a stomach analysis he has discovered 'occult blood.' Now, what does that mean? Well, it doesn't mean much to me. What definite information does it give? Little or none. This blood may come from an ulcer, or a carcinoma; it may results from the use of the toothbrush—you have heard those fellows cleaning their teeth in the morning in the sleeping car, which operation sounds like an old woman scrubbing the front steps. Well, those fellows will have 'occult blood.' It may also result from eating meat; and from other sources. You can't count upon it. It is one of the diagnostic pennies."

This straining after the comparatively unimportant was emphasized over and over again by the chief as he handled the intestines, dissected and stitched.

"Ochsner," exclaimed he, looking up again. "tells a good story, as he alone can tell it with all the frills. I cannot attempt to reproduce it as he tells it. It was in regard to a preacher who came to take charge of a church in a certain village. Now there belonged to this church a horse trader. The preacher needed a horse, and, naturally, turned to the horse trader to procure one for him.

"So he asked the horse trader if he would sell him a horse. A great struggle took place in the horse trader's mind. It is delightful to hear Ochsner describe the agony of the man—torn with conflicting emotions—his desire not to cheat the preacher—to overcome his long-acquired habit of over-reaching, and, on the other hand, to make something on the deal. He did not want to lose his status in the church, neither did he want to lose his

reputation as a horse trader. The horse dealer asked for a day's grace. The interval was one in which there was a great battle in the man's conscience. The following day the minister returned and inquired if he had picked out a horse. The trader replied that he had, and set the price. 'But,' said he, 'he has one or two faults I ought to tell you about.'

"What's the matter with him?" queried the parson.

"Well," the trader replied rather hesitatingly, 'if he gets loose you can't catch him.' The preacher thought for a moment 'Oh! that's all right,' he said, 'I am going to keep him in the stable, when I am not driving him. He'll never be loose. I'll take him.'

"So the preacher took the horse, hitched up, and drove off. But before he got many yards away, the horse trader, conscience-smitten, ran after him to tell the truth; and in a state of great agitation he blurted out, 'When you do catch him, he ain't worth a darn.'

"That's the way with some of these diagnostic findings," concluded Doctor Mayo with a smile, "when you do get 'em they ain't worth a darn."

* * *

Of course Doctor Mayo is not opposed to the work done by the diagnostic laboratories. Quite the contrary. The marvelous institution which he maintains, in association with his brother, is equipped with every diagnostic refinement possible, and their laboratories are doing much beautiful work of this character. Doctor Mayo believes in the laboratory, but he does not believe that it should be "the whole show."

Neither do we. The fact is, no good doctor can practice medicine by proxy. He must know what he is about; he must be trained in mind and skilful of hand. He must be able to see the things which other men cannot see and feel the things which other men cannot feel. He must have a broad grasp of every situation and of every problem. The eye which is constantly glued to the objective of a microscope is likely to have a restricted field of vision, and it is this narrowness (of mind rather than of eye) to which Doctor Mayo objects. The laboratory has become an essential, and no doctor should try to get along without it; but he should look upon it as an adjunct—and an exceedingly valuable adjunct—to his work. That's the moral.

Use the laboratory every opportunity you can get to do so, but cultivate for yourself

a broad vision so that seeing all you can understand all.

Far out on the deep there are billows,
Which never shall break on the beach;
And I have had thoughts in the silence
Which never shall form into speech;
And I have had dreams in the valley.
Ah me, how my spirit was stirred!
They float through the valley like virgins,
Too pure for a touch or a word.

—Father Matthew.

SOME NATIVE REMEDIES WORTH TRYING

The Eclectics have devoted themselves especially to observations in the sick-room, and also have made a study of the action of our native plant-drugs. Although these observers, more particularly the older ones, may not have been up to the present standard in the sciences that underly the healing art, it does not follow that they were altogether blind or incapable of observing correctly and reasoning logically from their experiences; and now that we are cut off from our German sources of supply it well may be that among our wild-growing plants, as used by certain American practitioners, we can find some neglected resources of value.

Very little is to be found on the native drug-plants in any of the textbooks in common use. American writers and compilers have closely followed their European teachers, and, except Bartholow, scarcely one has had the courage to investigate the Eclectic works. The Eclectics, on their part, have followed a similar, though opposite, course, and have confined themselves to their own peculiar materia medica, with some material taken from the Homeopaths.

Waugh, as a freelance, has taken pains to sift from the Eclectics' store whatever seemed likely to possess value, especially when the remedies had also been tried to some extent by regular practitioners. In his writings, he presents the evidence as it came to him, leaving the reader to apply it at his own discretion. Waugh feels convinced that there are many remedies of real virtue among these native plants, but that the evidence as to their powers and applicability is suggestive rather than conclusive in most cases.

Of Eclecticism, John Uri Lloyd is the head and front. His books and other literary productions present Eclecticism pure and undiluted; his genius and scientific proficiency make it respectable and honorable; while, in the practical aspect, the "specific medicines" of the Lloyd Brothers have pushed out the

competitive preparations almost completely. Thus, today, he stands as the exponent of this separatist school. Without John Uri Lloyd and the knot of able men connected with him in Cincinnati, and our own Ellingwood here in Chicago, the Eclectic school would have died long ere this. However, with the full and unqualified recognition of the merits of our native materia medica, the last excuse for the existence of Eclecticism will have passed, and it will have finished its work—a great work, in truth.

In the following we present a few characteristic extracts from the writings of Professor Lloyd and other leading Eclectics, which may illustrate the possible values in their remedies, but also showing the uncertainty of the evidence in their favor.

Rhus toxicodendron is indicated in scarlet fever by the dark-red or livid skin, buccal mucosa red, tongue narrow and glazed, pointed, dark with brown coat, breath discharges offensive, vitality failing fast. Very small doses of the specific medicine, 1-6 to 1-3 drop every hour. *Rhus* has been studied by Aulde and others. It ranks with cantharidin and delphinine; and it has been recommended especially in muscular pains, leaky bladder in women, nervous debility, and cutaneous affections requiring stimulation.

Salix nigra aments are sedative to the reproductive organs. The drug is fully replaced by salicin. All salicyl preparations depress the sexual function.

Sticta acts upon the base of the brain as a sedative, according to Lloyd. It is indicated by occipital and infrascapular pain, associated with cough, sore chest muscles, and, perhaps rheumatism. Dose of the specific medicine, $\frac{1}{2}$ to 1 drop. Waugh found no reliable data as to any trials made by regulars. It should be studied.

Staphisagria is held by Lloyd to relieve facial and cervical neuralgias and amenorrhea and dysmenorrhea when the menses are long separated and the flow is prolonged. The virtues of larkspur have not been studied except as to its principal alkaloid, delphinine. To this, Waugh has devoted nearly six pages in his book. Its action has been quite thoroughly studied, but, the results have not been applied in practice. It resembles the aconitine group on one side, and cantharidin on the other. Abolition of local sensibility caused by it being more decided in the lower extremities. It should prove as valuable in sciaticas as aconitine is in facial neuralgias. Spinal irri-

tations also come under the domain of delphinine.

Solanum carolinense is urged by Manley as an antispasmodic and nerve sedative. This plant has won reputé as a remedy for epilepsy. Its alkaloid, solanine, so closely parallels the bromides that it might well replace them; with the concomitant advantages of minute doses and also of less vital depression and interference with digestion. Solanine also has been studied satisfactorily. Waugh and Abbott devote more than twelve pages to it.

These are hints only. There are many other of these vegetable remedies which should be taken up and studied by members of the regular school—*lobelia*, for instance, a remedy esteemed of so much value by *Ellingwood* that he devoted practically the entire January number of his *Therapeutist* to its discussion.

Who of the great CLINIC "family" can—and will—join with us in promoting interest in American remedies? Will you? Or you?

The love of nature is a great gift, and if it is frozen or crushed out, the character can hardly fail to suffer from the loss. I will not, indeed, say that a person who does not love nature is necessarily bad; or that one who does is necessarily good; but it is to most minds a great help. Many, as *Miss Cobbe* says, enter the Temple through the gate called Beautiful.—*John Lubbock*.

TRUE AND FALSE ANGINA PECTORIS: TREATMENT

The diagnosis between the true and the false angina pectoris rests mainly upon our ability to detect structural disease of the heart or of the great mediastinal vessels in the former. But even yet we are unable always to associate the malady with any one of the lesions that may be detected—for every disease of heart or vessels may be associated with the spasm. Most frequently we find myocarditis and hyperplasia of the epithelial elements in the coats of arteries and capillaries. Interference with the nutrition of the cardiac muscular elements favors the development of spasm in them; hence, sclerosis of the coronary arteries has been found in many instances of angina. True angina occurs most frequently in men—and these belonging to the wealthier classes over fifty years of age.

False angina often occurs in women that are neurasthenic, anemic, about the change of life or even when much younger; in men or women who abuse tobacco or the caffeine-

bearing beverages; in neurotics, the tuberculous, and those who have long been infected with gonorrhea or syphilis; in those affected with any other cachexia. True angina also is more liable to occur in such individuals.

The symptoms are: pain in the region of the heart, described as a sense of compression with an iron hand; anguish, fear of immediate death and evidences of collapse, among the latter, cold extremities, feeble pulse, cold sweat, voice a husky whisper, face expressing agony and deadly terror, heart action becoming slow and irregular, skin intensely pale from capillary spasm, fainting sometimes, but usually restrained by the intensity of the pain. The latter often radiates to the left arm, along the *coracobrachialis*.

Fortunately it is not necessary to wait for a positive differential diagnosis between the two forms of angina, for the treatment is identical and the need for relief immediate. The pathologic condition is the same—cardiac and cutaneous capillary spasm; and the indication is for the speediest and most effective vasorelaxant remedy.

This spells glonoin, in order instantaneously to relieve the condition by relaxing the affected vessels. While no other known agent so quickly relieves the spasm, the action of all nitrites is evanescent, while their power is limited, because they are so disagreeable to the patient when pushed to effect: the sensation of speedy dissolution caused by the angina is replaced by a similar one produced by the nitrite. Then, too, inasmuch as the effect of the glonoin rapidly subsides, we may have a renewal of the vascular spasm.

However, these defects can exactly be remedied by adding to the glonoin an equivalent dose of atropine or of hyoscyamine. By this means the effects of the former are increased and prolonged. Atropine itself does not act quickly enough for the present need, but the addition of glonoin hastens the manifestation of the activities of any other drug administered simultaneously, by opening the lumen of the vessels and allowing freer access to the parts affected, notably the nerve-centers.

That spasm always is an evidence of depression is not generally comprehended. It precedes the complete loss of control in paralysis, and in all cases shows the spastic parts to be out of the control of the will, and of the centers in the cerebrum. Setting aside the instances where active disease-processes are at work, we often, if not generally, find that strychnine aids in restoring centric

control, provided we give doses small enough, but, yet, effective.

This therapeutic principle is nowhere quite so beautifully demonstrated as in treating the anginas, where quarter-milligram doses of strychnine, when added to similar doses of glonoin and atropine, materially aid the latter in their work, increasing the reaction of the physiologic forces from these medicines and rendering relief more decided.

In all our cases of either form of angina pectoris, it is our rule to provide the patient with granules of these three remedies, to be carried in the vest pocket, ready to be taken as quickly as the evidences of an approaching paroxysm appear. One granule is to be taken every five minutes until the flushing face denotes full therapeutic activity being developed; by which time there isn't any more spasm present.

Now we have time to take up the diagnosis scientifically: to examine the heart and great vessels critically; to inquire into the history and to scan the habits; to investigate the domestic and personal sanitation; to test for infections, cachexias, dyscrasias; to separate the true from the false angina. A word of caution: It is easy enough to distinguish between typical cases; but what is there in practical, clinical medicine so rare as a typical case of anything? False anginas foreshadow the true, and shade into them. Some cases are easier to recognize and to treat than they are to name correctly.

The treatment between paroxysms is too important and too long to be considered at this time. We shall speak further of but one form, the true anginas dependent upon an incurable and increasing heart lesion.

Such was the malady that deprived the medical profession of one of its most profound thinkers, Joseph Clements. Clements studied his own malady, and we are indebted to him for several useful observations on its treatment. After the usual heart-tonics had ceased to be of avail, he found that crataegus gave decided relief and staved off the inevitable end for years. When this drug had exhausted itself, he made trials of several little-used remedies, but the last one to afford relief was digitonin. The paroxysms had become more frequent, the relief from glonoin less decided and briefer, and the malady evidently was advancing rapidly toward the end. Various other remedies had been tried and had failed to give more than brief and partial relief; when eventually digitonin was suggested. The indication was for a remedy quickly to relax vascular spasm, brief

and noncumulative, without tendency seriously to depress the weakened circulation. Through its powers the last three months of Doctor Clements' life were rendered endurable, and his friends felt that the last possibility in the way of prolonging his conscious existence was secured.

Whatever may be necessitated by the existence of an infection or a cachexia, the cardinal indication here is, relaxation of the arterioles and capillaries. Thus, there is a freer opening to the nutritive current and the affected tissues are fed better. Whatever chance there may be for recovery, it is enhanced by bettering nutrition. A non-debilitating relaxant is the *sine qua non*; the whole tonic tribe is contraindicated formally.

SAFETY FACTORS OF INHALATION-ANESTHESIA

Enumerating the advances made toward rendering general anesthesia more safe, D. Kuhlenskampf, of Zwickau (*Deut. Med. Woch.*, 1914, No. 36), among the prominent factors involved lays stress, in the first place, upon the improvements effected in the automatic appliances for dosing out the volatile narcotic; these permitting a maximum of vapor concentration, independent of the operator's action, and preventing any accumulation of carbon dioxide. Then the author goes on to point out other measures and precautions.

Before all, access of free air (not oxygen) is a necessity. Next comes composure, tranquility, of the subject, which far exceeds in importance quietude of the surroundings; so much so that in case of need this restfulness should be assured by a preceding somnifacient—morphine, for example. [Better still hyoscine-morphine!—Ed.] The best and simplest inhalation method is the old sustained narcosis of Thiersch. Furthermore, the most important condition precedent to a safe issue of the anesthesia is a good appearance and unhampered breathing of the subject; under these conditions, the author asserts, control of the pulse and pupils really is superfluous, if not even undesirable. The safest and most satisfactory anesthetic is secured with the ether-chloroform vapor mixture according to the Witzel-Hoffmann or the Braun formula, using Braun's or the Roth-Draeger-Kroenig apparatus. In conclusion, the author reminds that in cases of doubt the operator now has at command local, lumbar, and venous anesthesia.

Leading Articles

More About "Twilight Sleep" in Labor

By FREDERICK LEAVITT, M. D., St. Paul, Minnesota

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ANALGESICS have been used in labor for hundreds of years. There is abundant evidence to show that it is a practice of great antiquity. The nepenthe referred to in Homer's *Odyssey*, the Scythian practice of inhaling the vapors of Indian hemp, the employment of mandragora, alluded to by Dioscorides and Pliny, and later used extensively as an anesthetic by Hugo de Lucca, who practiced in the 13th century, the soporific effect of mandrake mentioned in Shakespeare, all are examples of "twilight sleep."

When Sir J. Y. Simpson began the use of ether and chloroform, three generations ago, in his midwifery practice, it was not the profound narcosis of surgery that he sought to popularize, but the semiconsciousness of obstetrics. His writings excited the opposition of many, who contended that it was quite unnatural and against biblical teachings to deaden the sensibilities during childbirth. I quote a line from Meigs' "Obstetrics," published at about that time. Writing to Professor Simpson, in 1848, regarding the use of ether and chloroform, he says, "I have not yielded to several solicitations addressed to me by my patients in labor." It is now considered inhuman to withhold them during the excruciating last stages of labor.

When codeine first came into use, it, too, was thought to be a wonderful analgesic in labor. It was the common practice of many physicians to prescribe quarter- or even half-grain suppositories for maternity patients, with directions to use one as soon as labor began and to repeat every few hours. And, really, the drug has a most favorable action. Its toxicity is, probably, not much different from that of detoxicated morphine, the preparation recommended by the French gynecologist, Ribemont-Dessaigne, and so highly lauded in a recent number of *The Cosmopolitan*

magazine under the caption "Motherhood Without Fear."

Referring to this sob-provoking article, is it not touching to read such lines as those following? "They talked of the new generation" (a young man and woman are pictured in each other's arms, kissing) "born without pain into a humanity which should be better and gentler—redeemed from the ancient law of suffering. It was as though a new day had dawned for the human race. Men looked into the eyes of women and were unabashed; and women looked into men's eyes and were unafraid. . . . What war cannot destroy is the mighty discovery whereof I have written here. And the glory of generals will pale in the splendor of this conquest of patient scientists." (Vance Thompson, in the January *Cosmopolitan*.)

Mush! Who will deny the wholesome effect of war, when men can find profit in writing such puerile stuff!

A Skeptic, and a Conspiracy of Fate

Doctor De Lee, of Chicago, who was in Freiburg a little more than a year ago, says, "I went there a skeptic, and came away more skeptical." He watched ten or twelve parturients who were given the twilight sleep, but, whether it was chance or not that made them exceptionally poor examples of the advantages of scopolamine-and-morphine injections in labor, he is not prepared to say. Apparently he witnessed an unusual run of difficulties. Five of the cases were operative, in four, the forceps was required; and one called for craniotomy. In his judgment, in two of the forceps-cases, the women would have delivered themselves in due time had they not received the drugs. He believes the strength of the expulsive pains was weakened, which made instrumental interference necessary. The women were lacerated, and

one of them suffered a severe postpartum hemorrhage. One of the babies had convulsions, which continued until it left the hospital. Another patient labored thirty-six hours undelivered, when pituitrin was given because of danger to the child from delay. Then the pains became so strong that ether became necessary in order to control progress. In spite of this, the patient was badly lacerated.

In commenting upon the method, De Lee expresses the belief that there is a tendency to neglect some of the very important things in delivery, such as the condition of the birth-canal, for fear of arousing the patient. The placenta is delivered very gently, for the same reason. In three of the cases watched, he admits, the method proved ideal and that the condition of the patient after delivery was not different from that of those in his own wards at home.

The Stubborn Britisher

Speaking of the way the Freiburg methods are viewed by others, De Lee relates that Prof. T. W. Eden, of London, who was with him, had so little faith in it that he could not be induced to cross the courtyard to see it in operation. He had tried it, he said, and found it dangerous. Gauss, the chief exponent of the method, himself went to Dresden to demonstrate the morphine-scopolamine sleep in Leopold's clinic, but could not convince that astute clinician that it was safe or practicable. In Vienna, also, it was tried and, it is said, pronounced wanting.

I am much interested in the Freiburg procedures; they have appealed to me for many years. As long as seven years ago I began getting my patients out of bed on the third or fourth day, as they do over there, and never have had occasion to regret it. I have not practiced their system of artificial exercises, although I will say it looks reasonable to me. Instead of passive movements, I encourage my patients to be active and move about in bed after the first day.

I believe I was one of the first in St. Paul to try twilight sleep. Employing it a number of times and under varying circumstances, I abandoned its use because of the asphyxia it induced in the babies. Never was I so unfortunate as to lose a baby from its use, but I will say that I found it necessary to practice resuscitative measures in several instances. However, I am convinced now that too large doses were given. We expected too much from a single injection. So, for eight or ten years, off and on, I have given an occasional dose to patients whose suffering in the first

stages of labor demanded some sort of anodyne. My argument was, that it should be administered long enough before the baby was born to allow the influence of the morphine to pass off.

This was twilight sleep, so far as it went; but it did not go far enough. The object is, to take away from the mother the consciousness of her suffering and the recollection of the ordeal. Some mothers will object to this and will prefer to know what is going on, bearing with fortitude the pangs of travail rather than lapse into a state of insensibility. Most of them, however, beg for relief, sooner or later.

Suggestion as a Contributive Factor

All observers are agreed, whether they endorse the giving of this combination or not, that it must not be done in a haphazard way. To instruct a nurse of little experience to give a dose of the preparation, while you go back to bed, would be worse, indeed, than useless: it is dangerous. Or, to give the drug under unfavorable circumstances, such as commotion, excitability, glare and noise, would defeat the ideal effect. Doctor De Lee speaks of the use they make in Freiburg of suggestion. There is no question about this having much to do with the success; but, then, this is not peculiar to Freiburg. We all resort to it, and in every line of our work.

When I become more proficient, I shall perhaps be able to report similar results without the use of drugs at all. If, while administering hyoscine and morphine, I say to the patient, "This drug will take away a great deal of your suffering and make the birth of your baby seem like a dream," I am sure no one will criticize me if I get the result I desire. In the giving of pituitrin, for example, I am convinced that its effect is enhanced if, before injecting it, I say that it will make the pains stronger. I have even thought I got similar results from giving of granulated sugar when accompanied by suggestion.

I mention this, to show that what may act one way under one person's direction may act differently under another's. Assurance, confidence, and a willingness to give herself fully into the hands of her accoucheur makes all the difference in the world as to the progress and outcome of a given case. Unless a physician has the trust of his patient, nothing that he does seems to have the desired effect. This may account for the uniformly good reports that I have to make about the use of hyoscine and morphine.

In looking over some of my published statements concerning the use of hyoscine and morphine in childbirth, I find that on several occasions I declared the method pernicious and advised my friends not to meddle with it. Which only goes to show that one may change his opinion. The clinical observations that I now offer were made under more favorable circumstances, and with greater care. Ten or twelve cases prove very little, but the results have been so encouraging that I see no reason why I should not recommend the method to anyone willing to give it a fair trial.

Report on Deliveries Under Hyoscine and Morphine

Case 1. Age, 26. Bipara. Sac ruptured prematurely at a little after 4 o'clock in the morning. Came to the hospital at about 6 a. m. Pains, light; regular—every three or four minutes. Taken to the delivery-room and examined at 6:45 a. m. Cervix two-thirds dilated; head engaged.

One hyoscine-morphine-cactoid tablet of half strength (the standard No. 2) was given at 6:50 a. m. The woman was told that the effect would be, to make the pains of labor bearable and that she would pass into a semi-conscious condition, and that she would not sense the pain of birth. Within fifteen or twenty minutes she apparently was asleep, but would rouse when spoken to and would make intelligent replies to questions. She obeyed promptly the directions given as to her movements. With her hands clasped across her breast, she remained throughout the rest of her labor in a quiescent state, without a single outcry or even a moan. When asked whether she suffered much pain, she replied each time that she did not. When the head was passing over the perineum, chloroform was offered, but she said she hardly thought she needed it. Apparently the progress of labor was not interfered with. The baby was born at 8:30 a. m.—one hour and 40 minutes after I gave the H-M-C. The child attempted to breathe upon the birth of its head.

No effort was made to hasten the delivery of the shoulders, which were born spontaneously after three minutes. Upon laying the baby between the mother's thighs, it was left alone, to see how quickly it would begin to breathe, the heart-beat being normal. After a few moments it gasped and within another three minutes it began to breathe regularly. Its color soon changed from a bluish tinge to pink, and by the time the cord was tied and the eyes were treated it was breathing and

crying naturally. No difficulty was experienced in delivering the placenta. For two hours after delivery the patient remained in a state of semiconsciousness. She asserts that she sensed very little of what was going on and that the whole thing seems like a dream.

Case II. Age, 20. Primipara. Never was sick nor had suffered pain before. Taken in labor at 2:30 in the morning. Interpreted her pains to be owing to something she had eaten the evening before. Was not expecting to be delivered inside of a month.

I was called to see her at 5 o'clock. I saw she was in active labor, but made no examinations. I advised her going to the hospital, to which she consented. The amniotic sac ruptured soon after her arrival. One tablet of the half-strength H-M-C preparation was given hypodermically at 7 o'clock. This modified her suffering to such an extent that she remained quiet except at the height of a pain, when she made a short outcry, but fell asleep immediately afterward. She remained in bed.

The effect of the drug had partly passed off by 10 o'clock, when another tablet of the same strength was given. Within half an hour the woman was semi-conscious; would answer when spoken to; made numerous irrelevant remarks; snored. There seemed to be no abatement in force of the contractions, nor in their frequency. She vomited once during the second stage. Not that I thought it necessary, but rather as an aid, I applied the forceps when the head reached the perineum, supplementing each effort of her's with light traction on the forceps, until the parietal bosses passed beyond the ischial tuberosities. The blades then were taken off and the delivery was completed by the mother's own efforts. The baby was born at 3 p. m. Very little chloroform was given, and, though birth did not take place for five hours after the last hypodermic, she still was under its influence. The delivery of the placenta was normal.

The baby required no resuscitation, although it did not breathe for some moments after being born, and did not cry until after the cord was cut.

The following day, the mother declared that she remembered very little of what she underwent after the first injection. Before its administration, she was screaming with pain. That she was sensitive to pain and would have let us know it, I am sure. She was of the type that "hollers."

Under the influence of the drug, she could be controlled easily by suggestion. The room

was darkened and the place kept quiet. The duration of labor was about twelve hours. Within twenty minutes after its birth, the baby was crying lustily, and it showed no ill effects from the medication.

Case III. Primipara. Age, 19. Slightly short of term. Was taken with labor during the forenoon and came to the hospital in the afternoon. Breech position had been diagnosed some days before.

The first dose of hyoscine (gr. 1-200) and morphine (gr. 1-8) was given at 11 p. m. This made the woman fairly comfortable, but she did not sleep. Pains occurred every five or six minutes. A vaginal examination was not made until noon of the following day, when the cervix was found dilated to the size of a silver dollar. In the evening of that day, at 10 o'clock, a second dose, twice the strength of the first one, was given. The patient felt quite weary. She rested until 4 o'clock in the morning. The nurse reported that the uterine contractions had continued rhythmically throughout the night.

At 12 o'clock noon (the third day), the cervix was found fully dilated. A third dose (full strength) of H-M-C now was given and the amnion ruptured artificially. In half an hour the woman was under the influence of the drug to the extent of forgetfulness. Labor progressed normally. The scrotum of the male child showed at the vulva at 3 o'clock, and at 4 in the afternoon it came into the world.

At no time after the first half hour was the patient conscious of what was going on. Her remarks and replies were irrelevant, at times ridiculous.

When the baby's buttocks were partly extruded, a dose of pituitrin (1 Cc.) was injected into the mother's thigh. The next pain was noticeably strengthened, and within a few minutes the baby was born. No difficulty was experienced in getting the arms. The head was delivered with the forceps, because of a little delay at the perineum, though in all probability such aid was unnecessary. The baby needed no resuscitation, breathing well after a few minutes. Two stitches were taken in the perineum, and without extra narcosis, the tablet given four hours before sufficing. The woman made no resistance when the needle passed through the skin.

Case IV. Age 28. Bipara. I had delivered her eighteen months before, and it was a long, hard labor, the recollection of which had haunted her ever since. She was exceptionally well informed on medical mat-

ters; had read most of the popular articles on twilight sleep and had formed an unfavorable opinion of it, but was willing to waive her prejudices, if I advised it.

She came to the hospital at about 1 o'clock in the afternoon. The amnion had ruptured shortly before. Labor had not yet begun, but an enema, administered shortly after she reached the hospital, helped to start it.

The first and only injection of an H-M-C tablet (the No. 2: hyoscine, gr. 1-200; morphine, gr. 1-8) was given at 3:45 p. m. Delivery took place at 5:08 p. m. The injection was made in the thigh. Consciousness was never completely lost. At the end of twenty-five minutes the woman remarked that the pains were "not half bad," cheerily saying to her husband, "Don't worry, Billy, I am going to have a nice sleep."

Labor continued normally. A little before 5 o'clock I was preparing to give another dose—half of a No. 2 tablet, or, 1-400 grain of hyoscine, 1-16 grain of morphine—when the contractions became expulsive in character, so that chloroform was given instead; the patient going completely under its influence as the head passed over the perineum. The rest of the delivery was of conventional nature. For nearly two hours afterward she remained somnolent. The following morning, when asked how she liked twilight sleep, the woman expressed herself warmly in favor of it, likening it to a pleasant dream.

The baby began to breathe as soon as it was born, but did not cry vigorously until after it had been severed from the mother for some six or eight minutes.

The following is quoted by permission from a letter this mother wrote me later:

"In looking back upon my experience of first motherhood, I confess that it was with secret dread that I anticipated my second labor. When you asked me whether I would try the 'daemmerschla'f' this time, I readily agreed. I really cannot remember much about what followed. I know there were pains, but they were not the excruciating kind that I recall suffering in my first labor. Between each pain I fell asleep, and in what seemed a very short time my baby was born, though, in reality, it was two hours. I could scarcely believe it was over. Childbirth never again will hold any terrors for me."

Case V. Bipara. Age, 22. Taken in labor at 7 o'clock in the morning. Given the No. 2 H-M-C tablet in the thigh at 8:15 a. m. In forty-five minutes, she remarked that she knew when the pains came, but they seemed "far away." Evidently they were far away,

for, when I examined the condition of the cervix some hours later, I found it undilated. By noon the drug effect had gone. At 4 p. m. real labor-pains set in.

Before administering the second dose, I investigated the state of the cervix, at 6 o'clock, and found it well dilated. A tablet of the No. 2 H. M. C. was given. After forty-five minutes, the woman was able to talk connectedly and showed no memory loss. One-half of a No. 2 tablet (third dose) then was given. Labor progressed rather rapidly and was over twenty minutes later.

The baby cried and breathed naturally. I inspected it carefully three-quarters of an hour later and found its lips were blue, otherwise it appeared normal. The mother, when aroused, talked in a disjointed way, lapsing into restful sleep again when left alone.

Case VI. Primipara. Came to the hospital early in the morning. Labor was not very active until 4 o'clock in the afternoon. The first dose of H-M-C (No. 2 tablet) was given at 9:35 o'clock in the evening; the second, at 10:05 p. m.

The first dose did not produce memory loss. The woman slept soundly between pains and even snored, but when aroused by the pain she was rational in her conversation. Five minutes after receiving the second dose, she looked at the clock and remarked that it was now twenty hours since she was taken sick. Twenty minutes after receiving the second dose she exclaimed, "O my!" then went to sleep. So far as I could judge, the force of this labor-pain was fully as great as were those before the drug was given. When the next pain came on, five minutes later, she made another outcry. Half an hour before this, I had recited those familiar lines, "The boy stood on the burning deck," etc. Twenty-five minutes after the second dose I asked her whether she remembered the name of the poem and she said it was "Jack Spratt."

Regular pains continued at intervals of five minutes. At no time were they what might be called strong, but the drug did not seem to lessen their frequency or weaken their force. At 1:30 in the night a third dose was given. When morning came, the child's head was well down on the floor of the pelvis, but moving very slowly. A dose (1 Cc.) of pituitrin was given at 7:40 a. m. and preparations made to deliver with the forceps. After waiting fifteen minutes for some evidences of increased force, the forceps was applied and the baby delivered a few minutes after 8 o'clock in the morning. A rather severe

laceration of the perineum accompanied its delivery. The third stage was normal.

No resuscitative measures were required, the baby crying lustily in a few minutes. However, the baby began to fail after the second day and died of inanition two days later. I am not able to explain its death. It would not nurse, had to be fed, and "just naturally faded away."

Case VII. Age, 21. Primipara. She came to the hospital in labor at 8:45 a. m., and at 10:30 a. m. she was given a No. 2 H-M-C tablet. Up to that time she was crying bitterly because of the suffering. In less than half an hour she was quiet and moaned only at the time of a contraction, sleeping soundly between-times. At 2:45 p. m., a second (similar) tablet was given, and she continued comfortable for the remainder of the afternoon. A third dose was given at midnight, and both patient and I myself rested till 5 o'clock the next morning.

At this time, the baby's head was found low in the pelvis and the cervix fully dilated. Apparently the patient was tired out, hence, I decided to stimulate uterine contractions with pituitrin, so, at 5:45 a. m., 1 Cc. was given. In twenty minutes, this dose was repeated, but no particular influence was to be observed. Delivery was completed at 6:30 a. m. by instrumental means. There were no lacerations. The third stage was normal. The baby was born alive and gave us no anxiety. It weighed 7 pounds and 6 ounces.

Case VIII. Bipara. Age, 36. She was well in labor in the morning. When the first dose of the hyoscine-morphine-cactoid combination was given (at 10:45 a. m.) the pains were far between and weak. The sac had ruptured shortly before, and soon thereafter the contractions became more frequent and seemed stronger. This was noticed by the patient herself, and, although remaining conscious, she bore the pain without much outcry.

After an hour (11:45 a. m.), I gave half of a second No. 2 tablet, and she does not remember anything that happened from this time on, although she appeared to me to be cognizant of her surroundings. At 2 o'clock in the afternoon the baby was born. Every step of the delivery was as normal as any birth I ever attended. True, the baby was a trifle blue, but nothing was done to relieve the condition, and in two minutes it was crying as any baby should.

Half an hour after the second injection, I showed the patient an object taken from my pocket. She examined it carefully and told

me what it was—a pretty stone. An hour later I asked her whether she remembered my showing her anything, and she recalled the stone. The following day she again was shown this stone and asked whether she had seen it before or remembered hearing about it. She did not recall it.

Case IX. Mrs. V. Age, 23. Primipara. I was called to see her in the early morning. She had been in labor most of the night, but did not realize her condition. She was brought to the hospital at 8 o'clock, and given a No. 2 tablet of H-M-C at 8:45. At 11:45 a. m. the baby was born.

The child breathed and squirmed; in a few moments, however, it ceased breathing and became very blue. The ordinary stimulation by slapping was applied, but without much benefit. The cord then was ligated, the baby tubbed, its tongue retracted, and so on. After fifteen minutes the child was breathing well and since then has had no trouble. Mother and baby left the hospital at the end of a week. This is the only instance so far where it was necessary for me to use resuscitative measures. I now think that the second dose of H-M-C might well have been omitted.

[Doctor Leavitt does not tell when the second tablet was given.—ED.]

Case X. Age, 24. Primipara. Very stout. She came to the hospital a week or ten days before labor began; when it started, she was kept awake all night by beginning labor. When I saw her in the morning, she was having pains at regular intervals of five to eight minutes. They did not seem of much account to me, but she herself thought they were about all she could stand. At 10 o'clock I gave her one of the No. 2 H-M-C tablets, which afforded great relief. During the rest of the day, she was quite comfortable and rested. At 10 o'clock in the evening, the dose was repeated, also at 2 in the night.

The night passed like a dream and she remembers very little of it. When examined at 6 the next morning, I found the cervix fully dilated. The patient still was slightly under the influence of the drug. A fourth dose (No. 2 tablet) was given at 6:15 a. m. In twenty minutes, she was oblivious to her surroundings. The force of labor did not abate a whit, and progress was physiologically normal. The baby was born at 9:15 a. m., the action of the tablet still persisting. Toward the very last a few drops of chloroform were given. No lacerations occurred.

As soon as the child was born, it began to breathe and to cry slightly. It soon became blue, but continued to breathe. Once or

twice I spanked it gently, otherwise handling it the same as I generally do a newborn babe. By the time the cord was severed, it cried and gave us no further concern. The mother, although she was twenty-four hours under the influence of the morphine and hyoscine, has only the faintest recollection of the whole process of labor after the first dose.

Many more deliveries like the foregoing could be recited, but these few are typical of my more recent experiences with the H-M-C hypodermic tablet.

Some General Reflections

Therapeutic success depends largely upon the point of view and the attitude of the observer. The wish is father to the thought, and unconsciously we become influenced by our desires. Of the observations made in these few cases, I can only say that I have attempted to be honest, although I do admit that for some years my attitude toward drugging patients in labor has been against anything that might interfere with nature. This fact I had brought home to me recently with much force.

A very dear friend, who came a long distance to have me attend her in her first confinement, refused afterward to pay my fee, because, as she put it, "all I did was, to stand around and let nature do the work!" Her labor was long and tedious, and I spent hours encouraging her to bear with womanly fortitude a process that was essentially physiological. I admonished, I cheered, I held her hands, I did everything I could, except to put her to sleep and take the baby away. The case was one of the most trying I ever attended, but we got a fine baby and without harm to mother or child.

No wonder the obstetrician sometimes is tempted to "do something," when patients are unwilling to pay for a service that does not involve the application of instruments or the administration of drugs. The Good Book tells us that "they also serve who only stand and wait." The truth of this no one knows better than the obstetrician, and he knows to his sorrow that mere waiting brings a very meager reward. We, of course, should turn from all sordid motives in the practice of our profession; we should work in the best interests of our patient, regardless of remuneration; but, it stings to be told that all we do is to "sit around and let nature do the work."

In this so-called twilight sleep we have a good ally. By its use, Morpheus is invited to come and hold the expectant mother in

his arms and soothe her aching body, while we sit by and watch.

Another pleasant feature of twilight sleep observed in my experience is, that under its influence pleasant impressions prevail. The patient's personality shines forth most attractively. The women say nice things under the influence of this benign medicament. They sing their husbands' praises and pass into a beatific state that makes the atmosphere of the stork-chamber joyous, when otherwise it would be appalling. Under the effect of dreamy drugs, our advice and encouragement becomes more acceptable to her subconscious mind. If it be permissible for

Doctor Crile to steal a goiter, why is it not just as proper for the obstetrician surreptitiously to steal from a mother, the while she sleeps, the child she has been bearing within her body?

In conclusion I would say that twilight sleep should not be administered at random; that the dose of hyoscine and morphine should be given cautiously and in minimum amounts; that the subjects under its influence should be closely watched by an experienced attendant; and, lastly, that all the other advantages of environment and suggestion should be employed to their full extent.

St. Paul, Minn.

Making Loose Teeth Tight*

By EDWIN F. BOWERS, M. D., New York City

PROGRESSIVE American physicians have found out what ails ninety-five out of every hundred of us—and of all other adults in the civilized world. We now know why our gums lack grip, why we part untimely with our natural teeth. And this discovery has led to others equally amazing and valuable in overcoming dangerous and even heretofore incurable maladies.

It is all on account of one, or possibly two, varieties of our hereditary enemies—the Germ Family—which are found luxuriating on our twenty to thirty inches of tooth surface; also between and under the teeth, or in the crypts and pockets about their roots.

These animal parasites are the cause, and the sole cause, of pyorrhea alveolaris, known also as Riggs' disease of the gums. The name of the principal miscreant is *entamoeba buccalis*. He was first discovered by Prowazek in 1904; but he has heretofore been considered a harmless vagrant, contented to loaf around on the outside of the teeth and gums. The charge against him was merely that he existed; for the evidence showed that he was occasionally found in what were thought to be perfectly normal mouths.

But his real character was revealed last summer, when Dr. M. T. Barrett and Dr. Allen J. Smith (the last named is professor of pathology in the University of Pennsylvania) demonstrated conclusively that *entamoeba buccalis* was the long-fingered villain that had been picking perfectly good teeth out of long-suffering gums. These findings were checked

up and proved by Dr. C. C. Bass of the Tulane College of Medicine (who is to bug what Cesare Lombroso was to human beings), Dr. F. M. Johns, and later by wide-awake pathologists and dental experts throughout the country.

Of course, to get absolutely incontrovertible proof of this discovery, we ought to inoculate a healthy person with Riggs' disease by injecting living amebas into his tissues, thereby producing what would then be the matter with him. But this savors a little too much of human vivisection, and it is hardly likely that it will be done merely to demonstrate what is already proved by the invariable presence of amebas in every case of pyorrhea examined, and by their absence in all patients who are not "Rigged."

I call this bug a "long-fingered villain" advisedly; for, in common with others of his vicious breed, he gets his living by thrusting out jelly fingers (pseudopods) from various parts of his anatomy, in his search for food, or to assist him in migrating about.

The *entamoeba* gains an entrance beneath the red ramparts of the gums through abrasions or wounds made by toothpicks or dental floss, the healing of which is prevented by particles of food forced between the teeth. Again, the disease may enter through inflammation around the roots of the teeth, excited by ill-fitting crowns, overhanging margins of improperly constructed fillings, or through malocclusion (failure of upper and lower teeth properly to oppose one another), or through stony substances called calculi deposited from the saliva or blood serum, these being almost

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invariably found when pyorrhea is present. Extensions of the tooth enamel also press the gums, causing irritation and sponginess, which favor the breaking and entry of the invading amebas into the domicile of the tooth roots.

Once within the ramparts, the amebas may be relied upon to do the rest. They begin the attack by digging microscopic trenches and spreading infection, furnishing, in a short time, a favorable ground for reinforcements in the form of pus-producing germs, the staphylococci, and other irregulars in this perennial war.

The campaign that these Huns and Visigoths conduct carries the tissue destruction and purulence deeper and deeper, the outer coverings of the tooth roots being eventually destroyed in the siege. Finally the army reaches the tooth sockets, and attacks their bony structure. The teeth become loose, and pressure causes pus to flow from about the roots. Ultimately the suppurative process entirely destroys the attachments of the teeth. They fall out, or else become so loosened that they can be plucked out with the fingers.

Symptoms—Early and Late

The victim of this invasion usually has no knowledge of his condition until he begins to notice that the gums bleed freely on the least provocation—when brushing the teeth, for instance, or when removing impacted particles from between them. As the condition develops, the gum is stripped away from the tooth, destroying the sheath and alveolar process, the bony casing and nutrition chamber of the tooth.

Last stage of all is the shrinkage or retraction of the gums, and the final abdication of the teeth.

Dentists and physicians have wrestled with this almost universal problem of pyorrhea since the old Egyptian first penned his futile prescriptions in the Ebers Papyrus. All sorts of theories have been advanced to account for it, the most generally accepted being that it was of systemic origin—either from tuberculosis, constitutional blood disease, diabetes, Bright's, or diminished alkalinity of the blood. Still other theorists, just as vehement and every bit as sincere, held that pyorrhea was due to a neglected state of the exudates, secretions, and debris of the mouth. They insisted that there was no systemic cause for its development other than what might predispose to any disease, and that it was simply a local inflammation.

Upon the treatment, however, almost all dentists agreed. This was deliberately to ignore the sensitive nerves of the patient, and scale all the hardened deposits from his teeth, no matter how far up—or down—beneath the gum margin they may have extended. This gentle process was repeated as the calcareous or other accretions reappeared, or as often as the pyorrhea demanded it or the patient would endure it.

Six months was considered a fair time allowance for the chastened and well-scraped victim, with ordinary diligence, to accumulate another deposit. Then the scaling and the polishing with orange-wood sticks and pumice stone, and the burnishing and smoothing of tooth surfaces, would be repeated.

It must be admitted that this treatment, in conjunction with a scrupulous toilet of the mouth, has perhaps given better results than any other methods thus far elaborated. But we were told that we were incurable; that we must continue to report for a semiannual ceremony of tooth scraping and polishing so long as we had a tooth to our name.

Some extremists even hastened the day of complete toothlessness, arguing that if an infected tooth was extracted, the roots of that particular grinder would be forever cured of Riggs' disease. Which is as eminently true as that amputation of the leg will cure an ingrowing toenail, or cutting off one's head will stop hair from falling out.

All this will be changed now. The old methods will be relegated to the dust bin of the Things of Yesterday. For when Doctors Barrett and Smith found the cause of pyorrhea they also found an absolute cure for it. A specific remedy exists that is as certain in its annihilating action upon these amebas as is quinine upon those of malaria.

Emetine, the Ameba-Killer

This drug is emetine hydrochloride, an alkaloid derived from that old-fashioned remedy, ipecac—familiar friend of those departed days when not to have had croup, mumps or whooping-cough was to invite social ostracism. Our knowledge of Lady Emetine's action as an amebicide (a killer of amebas) is based upon the work done, some years ago, in Manila, Philippine Islands, by Dr. E. B. Vedder of the United States Army. Doctor Vedder found that emetine was practically a specific for that form of dysentery which is also produced by an ameba, as like the *entamoeba buccalis* as are two peas—when they are alike. He successfully treated hundreds of cases, and his methods have now for

some time been in use throughout the tropical world.

So when Doctors Barrett and Smith, examining a group of forty-six victims of pyorrhea, each of whom had amebas to spare in the pus pockets of his gums, looked about for something to slay these bugs with, they naturally thought of Vedder and his emetine. Various methods of administering the drug were tried; but the hypodermic finally gained the preference.

A deep injection of two cubic centimeters of a one-half percent solution of emetine hydrochloride is made into the muscle of the upper arm each day, for three successive days; alternating the arms, to prevent undue irritation or itching. Some authorities prefer to use 1-2-grain tablets of emetine, dissolved in a hypodermic syringe full of water—which gives about the same quantity of drug as the ampule of solution. [Use 1-2 grain of emetine hydrochloride for each injection, always. Ampules are advised, and Bass recommends from three to six injections on as many consecutive days.—ED. C. M.]

This is reinforced by a similar injection every fourth to seventh day, until the gums are entirely healed, and the teeth have been tightened back into their places. In addition, it has been found that the cure is hastened if a little 1-2 percent emetine solution is forced into each gum pocket.

Results of Emetine Treatment

In many cases thus treated all pus disappeared within twenty-four hours after the first injection. In every case receiving the combined intramuscular [subcutaneous] and local injections, active signs of the disease were cleared up, the tissues took an appearance of youthful health, the teeth felt firmer—and were firmer—and the gums became harder and tighter.

The tendency to bleed stopped entirely in from twenty-four to forty-eight hours, and when only the gum tissue was involved the inflamed gums became normal in from three to ten days—or apparently just as quickly as nature could finish the repair part of the job.

In all the cases thus far treated no parasite has survived the second or third dose of this ameba poison, as proved by microscopic examination of the mouth secretions. Hundreds of pyorrhea cases have been completely cured since the announcement of the discovery last July.

For home treatment in the early stages of Riggs' disease, excellent results have followed the local application of emetine solution to

the gums. This is accomplished with a movable-tip atomizer, or by placing one or two drops of a 1-2-percent solution of emetine hydrochloride, or even a few drops of fluid extract of ipecac, upon a wet brush, and forcing the solution between the teeth, at the gum margins. In several instances the amebas disappeared, bleeding stopped, and the gums resumed their normal complexion within a few days.

On account of the widespread prevalence of pyorrhea, a fact that cannot be too strongly emphasized, it might be an excellent precautionary measure to continue this prophylactic treatment indefinitely, even after a complete cure of pyorrhea has been effected—keeping a bottle of fluid extract of ipecac, an atomizer, or a vial of emetine solution, on the bathroom shelf directly alongside the tooth paste, for this purpose.

It would be well also to remember that, where there is destruction of the membrane covering the roots of the teeth, or where the gums have receded, this tissue has gone the way of all flesh. It cannot be entirely replaced by any form of treatment. With a healthy local nutrition taking the place of an active disease process and pushing it completely off the map, some slight development of gums and root covering may perhaps be expected; but even though this may not take place, be thankful that the destructive process can be arrested.

It requires no expert knowledge to give this treatment. Any capable and careful physician or dentist can make the injections. Personally, I should prefer a conscientious dentist to officiate in the slaughter of the parasites, as he would be qualified also to remove all tartar or other deposits from the teeth. This thorough cleaning and scaling should be done semiyearly, in any event.

Pyorrhea should not be confused with that condition in which there are simply tartar deposits on the teeth. In pyorrhea there is usually, but not always, tartar. The tartar is merely the result of a combination of certain secretions of the mouth with organic and mineral matters derived from the food, usually in the presence of an excess of acid. By keeping the mouth secretions more alkaline, using soda, salt, or milk of magnesia for that purpose, much of this trouble can be prevented. And what can't be prevented can be cured—by chopping it off.

Pyorrhea, however, is a distinguished member of an entirely different breed of germs. It requires specific treatment by emetine hydrochloride to banish this baneful tribe.

The cure of Riggs' disease is, interestingly enough, only one of the many medical marvels that emetine accomplishes. For instance, it has been known for some time that a complete clearing up of many cases of diabetes and other systemic conditions have followed the mechanical removal of all evidences of pyorrhea. In one case, reported by Dr. D. D. Smith of Philadelphia, a man of fifty-seven was under treatment for some time on the usual diabetic diet and other measures, with no appreciable results. Successful instrumental treatment of the pyorrhea, with no further constitutional medication, resulted, within five months, in the complete elimination of the sugar from the urine. In another case, treated at the same time, the results were equally satisfactory.

Pyorrhea May Cause Systemic Disease

If science should eventually prove that certain forms of arthritic rheumatism, gout, and the circulatory and heart complications that accompany these disorders, are due primarily to the entamoeba buccalis, the discovery of this germ and its Nemesis is even more important than is Ehrlich's magnificent achievement in perfecting his specific for constitutional disease.

Quite recently several cures of Bright's disease have been reported by credible observers, resulting from the correction of pyorrhea infection; that is, the patients were cured, so far as the test tube, the microscope, and physical inspection were concerned. Albumin and waxy casts disappeared from the urine, and dropsy and all other symptoms were cleared up. It is too early to enthuse, perhaps; but it is evident that a strong note of hope is sounded for many sufferers from these troubles.

Also, in five out of seventeen cases of excised tonsils recently examined by Doctors Barrett, Smith, and William S. Middleton, the entamoebas were found occupying reserved seats, and it is thought that with increased experience in the technic of hunting for them this percentage might be materially increased. The far-reaching significance of this will appear when it is remembered that infection from the tonsils undoubtedly causes some forms of rheumatism, anemia, Bright's disease, and diabetes, and that we may now be on the trail of the cure of these diseases.

It also seems quite likely that we have discovered one more cause for that complex and sadly maltreated condition known as "stomach trouble"; for in a number of cases of Riggs' disease treated by Doctor Barrett

and others there has been noted, after the assassination of the pyorrhea amebas, a complete disappearance of all symptoms of stomach and intestinal disorder. This seems to indicate that the cure of the mouth lesions had eradicated the bacteria and other poisons, the constant swallowing of which may have caused the alimentary organs to send forth their wails of distress.

So, if you have tried diet and digestives, lavage, and plain living, without quieting the gastric protests, it might be worth while to have a competent pathologist take some of the secretion round the necks of your teeth, add a little salt water to it, and put it under a low-power microscope. If the entamoeba buccalis is observed splashing around, and enjoying himself as if he were at home, and intended remaining for some time, get your physician or dentist to give you a course of emetine. It seldom does any harm—unless it be to provoke a little temporary nausea, or cause a trifling local irritation—and may entirely appease the anger of a long outraged digestive tract.

Another grave condition, one cause of which undoubtedly originates in infection derived from the presence of amebas in the mouth, is uremia (an excess of urea in the blood). This occurs as a result of the constant swallowing of toxins generated by parasites, and of pus and other effete products, which are constantly and inevitably taken into the stomach because of the infective condition of the mouth.

The belief is now gaining ground that anemia may be in part due to septic conditions in the mouth. If this be true, as maintained by Dr. William Hunter and other English physicians, our old friend, the Entamoeba Bug, is undoubtedly a large factor in the infective process, and may be an accessory before the fact in causing this obscure and obstinate disease.

Economic Value of Emetine

In fact, this revolutionary discovery of Barrett and Smith is so far-reaching in its scope as almost to take on the aspect of a medical miracle. Even from an economic viewpoint, measurable in increased human efficiency, it is worth millions of dollars to the world.

As illustrative of the remarkable results obtained by this treatment, a typical exhibit "A" might be limelighted. The case is one of a number treated by my brother, Dr. A. T. Bowers, of Pittsburgh. The patient, a man of wealth and culture, spent most of his time

in traveling. To his certain knowledge he had been afflicted with pyorrhea for upward of twenty years, and without his knowledge for probably as many more.

He had tried all known forms of treatment. From Hongkong to London, from Petrograd to Pittsburgh, his pilgrimages carried him, and always he had his pyorrhea in mind (perhaps I should have said the cure of his trouble, as the mind, so far as we know, isn't pestered with pyorrhea).

The old gentleman was as "nervous as a cat," and was the chagrined possessor of a breath that was indubitably not related to the perfumes of Araby the blest. Also he had that very common condition known to doctors as "malaise," but among the laity as "all in." This included the ownership of a sallow skin, a coated tongue, and a woful lack of appetite and ambition. The impatient victim had lost four or five much-prized teeth, his gums bled under the slightest provocation, or from no provocation at all, and he could, if he were so minded, shake every tooth in his head. He himself asserted, in all sincerity, that he could wag his teeth proportionately much farther than he could his head.

He received three injections of half a grain each of emetine, part of which was introduced directly into the pockets at the roots of the teeth. This was followed by one additional injection a week, for four weeks. After the second injection the bleeding stopped. The gums became progressively firmer, and now, after six weeks, so far as ocular evidence is concerned, the man is cured. The nervousness and "all in" feeling have been replaced by a grip and vigor that had been his only in pleasant dreams for many years. His digestion has improved notably, and if he were sufficiently foolish to attempt it, he probably

could crack nuts with some of his remaining teeth.

But the antibleeding action of emetine on the gums fades into insignificance in comparison with its marvelous power of arresting dangerous hemorrhages from other sources. The most obstinate cases of nosebleed—cases that have resisted the action of all styptics, packing, tamponing, or local applications—have been stopped almost instantly with one injection of emetine.

Immediate results follow its use in the distressing and dangerous hemorrhagés of tuberculosis and gastric ulcer, and its action in other forms of bleeding is almost instantaneous. It is thought also that the difficult and delicate operation of blood transfusion, intended to check hemorrhage in babies and others lacking coagulating power in their blood, will no longer be necessary. Instead of risking the introduction of an air bubble into the child's veins, which might stop the heart's action, or introducing particles of solid material, such as fibrin, which might lodge in the small capillaries of the brain and cause paralysis, the doctor will now need merely to inject one-half or two-thirds of a grain of emetine hydrochloride. This does the same work, in a much shorter time, and without risk.

Also it is interesting to know that the fighting armies of Europe are being supplied with these tablets to prevent or limit bleeding from wounds.

The credit for developing the antihemorrhagic uses of emetine we must share with French physicians; but as to our priority in determining the cause of pyorrhea and its resultant diseases there can be no question. It is greatly to the credit of America and American physicians that this epoch-marking discovery can be labeled "Made in America."

LET the weakest, let the humblest remember that in his daily course he can, if he will, shed around him almost a heaven. Kindly words, sympathizing attentions, watchfulness against wounding men's sensibilities—these cost very little, but they are priceless in value. Are they not the staple, almost, of our daily happiness? From hour to hour, from moment to moment, we are supported, blest, by small kindnesses.—F. W. Robertson.

An Old Doctor's Life Story

An Autobiography

By ROBERT GRAY, M. D., Pichucalco, Mexico

EDITORIAL NOTE. *This article is the third installment of Doctor Gray's autobiography. Every physician should read this intimate record of the unfolding of an unusual life. Doctor Gray was born in the Old South, was educated in France under the old regime, fought through our Civil War on the Confederate side, and soon after its close plunged into the very depths of tropical Mexico, where he has spent the greater portion of his romantic and adventurous life. Now, at the age of eighty-five, he has given his story to the world through the pages of "Clinical Medicine."*

III.

VOLUPTUOUS, gay New Orleans! How my soul saddens to revert to thee, in that far, bygone age, that on mine set the deepest seal of regret human heart ever wore.

I came to New Orleans, ere I went home, desiring to be done with the problem of studying, outside of actual practice.

In that day of high-tide Southern prosperity, New Orleans was a wonder and a show, the mart of wealth and the stage of merry festivities, with some of the flippant follies of giddy Paris. There was dissipation galore, horse-racing, gambling, drinking of good old whisky and fine champagne. There were the rendezvous of wealthy planters and their families, there was the great slave-market of the Cotton States, there was the vast Creole quarter of the Old French City, there was there a superfluity of the good, the gay, the bad.

I was invulnerable in two things: drinking (not even wine) and gaming; but less so, in another—my weak point. I met there at New Orleans several young men, scions of wealthy families, whom I had known earlier in life; young fellows something less scrupulous than they possibly would have been in their paternal neighborhoods and spending their cash contrary to pious injunctions. They told me of a female Eldorado in the élite residence quarter of the city, where private women of public respectability met properly guaranteed strangers, where an introduction was as difficult to secure as the entrance into a Masonic lodge; but that an arrangement might be made to guarantee me to the landlady of the house, the neighbors of which had no suspicion that it was not of the highest respectability. I listened, and my curiosity was perilously piqued. Yet, I remembered what my preceptors told me of such resorts in Paris, where low-class harlots met cautious strangers under the guise of being young women clandestinely absent from home for the nonce. However, I resolved to

prove out and expose the fraud, in order to mortify my credulous young friends.

An elderly man whom I had never met conducted me to the house, which we reached, in a closed carriage, by entering an alley that led to a door in the rear of the house, but invisible from any street. Leaving me in a vestibule, my guide went in to confer with the mistress of the house, after which I was admitted and presented to a woman who bore not the slightest earmarks of familiarity with bawdy life.

This woman told me that there was a beautiful married woman, the wife of a rich old man, who neglected her, by attending board meetings and other business engagements at night, and she wished to meet a stranger of my pedigree, but had as yet found no one she could trust and who was not a complete stranger there. She said, if I cared to make her acquaintance, the woman would see me before I saw her; and, if I struck her fancy, I should never be permitted to spend a cent upon her. I was then requested to remain seated alone a little while. In a few minutes the landlady returned and introduced the object of our conversation, then left us alone.

The woman was as exquisitely lovely in form and features as any I had ever met even in Paris. She told me much the same story of her husband as that related by the mistress of the house, affirming that he was goodness personified, never mistreating her, not even with a cross word; but that money and its attentions absorbed his life to such a degree that he rarely was in the house before midnight, always leaving immediately after the six o'clock dinner. She exculpated herself with the plea that she was young and passionate, yet had never been astray up to that moment, because she had been unable to see an acceptable stranger whom she could venture to meet without danger of exposure. But, she concluded, she felt she could safely trust to the honor of my medical education.

Subsequently, I met her twice within a week or ten days, becoming quite persuaded that she had told me the truth, at least in some measure, as she would accept no money, and the woman of the house would not take room rent. But, ye gods! the retribution of Nemesis may come slow and seemingly reluctant, but also it may be flung fierce and furiously in the midst of a delicious dream of ecstasy too wild and exquisite to last.

A dear friend of my tender years, a relative of my mother—I do not now remember how near—moved to New Orleans while I was a mere lad. This man had been instrumental in securing the influence that placed me on such solid footing with my grand preceptors in Paris. I had called on him in his office during business hours, and promised to dine with him during my stay in the city; one thing and another, however, had prevented me from joining him at the proper hour. By and by it happened that I was standing on a corner of Canal and some cross street one afternoon, when I heard my name called, and, turning, saw the carriage of my good friend edging up to the curbing.

"Get in here with me, Robert, and come along to dinner, or you will be leaving without honoring me with even that pleasure."

I stepped into the carriage, and away we rolled, drawing up at a house with granite front and marble steps, one of the most elegant residences in the city in that period.

My Friend's Wife

We entered a handsome parlor, tastefully furnished, and decorated with superb paintings. I seated myself facing a painting of Lafayette, a French character first in my estimation of all the revolutionary group. But the rustle of skirts, so familiar after the women have dressed for the six o'clock dinner in southern cities, aroused me from the reverie into which the career of Lafayette had plunged me. I arose and turned to be presented.

O ye infernal gods! Never had I felt that I wished the earth might yawn and swallow me up. There stood before me, in transcendental loveliness, my paramour of the clandestine refuge, pale and aghast, as if in the act of swooning. I recovered myself and rallied to her rescue so gallantly that she was herself in external semblance in a trice, her back being to her husband, who probably little heeded the impressions of the introduction.

Fortunately, dinner was on the table, or rather announced as ready to serve, where we were soon seated in passable composure.

There my old friend led off in convenient conversation, asking me many questions about as many things, that called few expressions from the wretched wife, who was suffering the racking agony of crucifixion. I do not believe I have ever been in the presence of such suffering, although I have seen convulsive torture, wringing groans and shrieks from lips responding to the sheer delirium of writhing physical pain. But there she sat through two hours, that must have seemed an age to her, mutely stifling excruciating contortions of conscience and appalling dread that her fearful secret was about to leap forth in all its odious deformity.

I myself was by no means as comfortable as I had been at many a dinner in Paris; yet, I realized that it all depended on me to sustain her through the ordeal, wedging some short reassuring expression in the conversation to her, requiring a laconic yes or no. The husband was so absorbed by the items of information he was drawing from me that he seemed not to notice that his wife was nonplused.

At last the meal was at an end, and then my friend said: "Robert, I am now due at a meeting of directors, and shall leave you to entertain my poor wife for an hour or so. Poor soul! my obligations force me to neglect her most shamefully."

We rose and passed into the parlor, he not seating himself, but going on out of the door and down the steps.

The sound of the carriage wheels beginning to roll had no more than penetrated to the parlor, when the unhappy woman flung herself on her knees at my feet, the pathetic desolation of Niobe twitching her lovely features, pallid with the terror of despair, the wells of her heart breaking up in torrents of burning tears, her late consuming passion congealed as if by an arctic blizzard.

"O God! if these polluted lips are not too base to breathe once again Thy holy name, bear me witness that I have never unchastely sinned save with this victim at whose feet I kneel and record my desperate vow that I will nevermore thus offend. Pardon me, this once, and I will ever after be a true and faithful wife, whatever my grievance may be, notwithstanding!"

Then she turned to me. "And now, thou appreciated friend of my generous husband, whose honored name I am unworthy to bear, you have heard my supplicating appeal to heaven! I know you will be merciful and guard my horrible secret in your great southern heart. And I swear to you never to

be guilty of any dishonorable conduct again in all my life."

I promised all, over and over again, and should have pledged my life to keep that dread dishonor from the bare suspicion of her husband. Then I bade her a sad good-night and good-by, firmly convinced that a few hours of bitter contrite weeping in solitude would be the best medication she could have.

I took shady sides of streets, with my hat slouched over my face, like some guilty wretch fleeing from the scene of his crime, and thus hastened to my room, locking and bolting my door inside, resolved to see no one that night, not even making a light.

Time Can Not Erase the Soul's Scar

I no longer doubted the story of my young friends that women in a high degree respectable, in popular estimation, visited the house where I had tarnished my escutcheon with a stain the fires of purgatory could not purify in a million of years. Yea, even tonight, after these many, many long years, that ever deplorable catastrophe outweighs all the concentrated sins of all my life, and all that I might perpetrate in another score of even reckless years.

The mere thought that the wife of the bosom of my truest friend—the friend who had rendered me services beyond what had been vouchsafed me by all my countrymen besides—had been dishonored by me, a miserable, dissolute wretch, almost maddens me at this far-distant age, when most of the slips of my early years tranquilly repose in the throbless bosom of Oblivion. That this woman was ardently in quest of these episodes was no mitigating circumstance to palliate my rankling remorse of ever immedicable conscience. Neither does the thought that some other, to whom the husband was unknown and would not have been considered, would have plucked from her fair brow the immaculate diadem of holy virtue, offer the slightest disculpating solace to my regretful memory of that dark and trying hour in which she knelt at my feet, imploring heaven and me to pity her goading distress. O, God! how that desolate picture of Thy most lovely handiwork flits through the weird shadows that my flickering lamp throws around me this lonely night, as if menacing me to depict the soul-rending scene in colors sufficiently startling to check unbridled lust in woman, grown indiscreet from the influence of jealousy or other foible of the overfardel'd heart!

Since I am thus moved by the mere specters of shadowy memory, at this late day, behind

the intervening curtain of more than half a century, what words or subtle phrases have power to tell the nameless suffering smothering me in the haunted solitude of my darkened room after I had torn myself from the pathetic scene, leaving my despairing victim writhing in the torturing throes of fiendish wretchedness? Sleep was exiled afar. At the unwonted hour of three o'clock, I arose, made a light, then dressed and packed my luggage.

At four o'clock, I paid my hotel bill, telling the night-clerk that I was too urgently called away from the city to write notes of adieu to any of my friends, and could not at this moment leave with him my address. Then I entered a carriage and was driven away, fleeing from New Orleans as if I had been warned that the sulphurous cloud of Sodom and Gomorra was about to rain the fire of destruction upon the city at sunrise, but in which I should rather have been submerged than to have remained to face my old friend and my young scapegrace friends who told me of the enchanted house—a house that else I might never have believed to be a luring reality, to this day, for it seemed to me so unnaturally impossible that wealthy members of reputable society could have plunged from elegant homes into such a whirling eddy of giddy degradation at one madly blind leap, actuated by reckless passion alone, strangers to any of that mercenary motive which sometimes leads distressed and unscrupulous women astray.

The Purity of Our Women Should Be Sacred

If there be any one thing more sacredly above and far beyond all besides in the tense life of this frail and fickle humankind of ours, it is, or should be, the queenly nobility of our women, the wives and mothers of sages and heroes, the influence of whose immaculate purity and conquerable virtue should dominate our motives and actions. That I came within the luring enchantment of the fair seductive charmer, this woman who left me the pricking sting of grieving shame and undying regret, was my own culpable indiscretion, incredulous that such a woman as I met could possibly be thus enthralled, could swerve from that high standard I have depicted.

I never had believed that there had been such voluntary female baseness, not spurred by frantic jealousy, by the insatiable yearning for else unattainable luxury, or by the maddening menace of sheer want of means to nourish otherwise perishing loved ones. But that the reigning queen of a palatial home'

whose every want was anticipated, having money to squander unquestioned by anyone, should thus descend from her pedestal, wantonly desert the sacred shrine where she was crowned and ruled in such regal majesty, only to become the paramour of an utter stranger, from whom she exacted nothing but the passing gratification of inordinate passion, I would not believe even now, had not the implacable evidence been focused beneath the startled gaze of my open eyes; and I am yet reluctant to believe that her's was more than an exceptionally rare occurrence.

I have never marveled since that humiliating experience that the angels fell under the luring enchantment of the subtle coquetry of the fair young daughters of earth while the world yet was new and warm and her humanity still immortally endowed. For, I must confess, however shamefully reluctant the truth must be wrung from my rankling bosom, that my infatuation for that wayward woman might, in a little while, have become so blindly reckless that she could have lured me to the very margin of hell, and even inside the dread portal, had she led the way into that abyss of sin.

She was meek, and she was modest,
She was handsome, and she was tall;
Her hair was black, and she wore it curly;
And, oh! those sweet dark eyes withal!

This woman's morbid passion, doubtlessly its legitimate diagnosis, was as insatiably wild and furious as that of the seamstress of my tender years, while her polished bosom and highly cultivated mind rendered her far more fascinating than the other could have been under any imaginable circumstances. And I am sure I should have sacrificed all there might have been of brilliant prospects in the translucent trend of futurity for me and permitted her to rush headlong into the shoreless gulf of irretrievable ruin. Happily, timely providential intervention saved us both, if not from ever pursuing remorse, then, at least, from the dire consequences that an uninterrupted pursuit of our intrigue inevitably would have entailed. Had I encountered a hospital as my coach rolled along over the shell road, while I was watching the crepuscular tints of early twilight chasing the sable gloom from the dark face of Lake Pontchartrain, I fancy I should have paused and entered, bent upon submitting to orchidectomy, so horrible was the state of my mortification.

I never saw my old friend again and never wrote him a letter. He died some two years later; and a year or so later I saw in the

papers that his widow had married a very worthy man, all the fortune of my old friend having reverted to her, under his unreserved will and testament. I met her and this husband, and their children, refuging from New Orleans after the Crescent City surrendered to the federal army; and she told me that her vows and oath made in my presence were never broken, and that, unsullied in his eyes, she remained his cherished darling to his latest breath.

And here I will set down that that humiliating episode impressed me so crushingly that I remained absolutely and utterly estranged to any amorous adventures of any kind for more than ten years.

I went out among big slave-plantations and passed two months longer than my purposed time ere I had courage to face my sisters and my sweetheart, meanwhile finding a superabundance of material of disease-conditions to study among the negro population, and gaining some useful practical experience in the treatment of their diseases. This opportunity was gratefully accepted from a Parisian student, and several contiguous plantations offered me a joint salary for attending their people, such as I have never been able to attain even in the highest tide of munificent earnings; which, however, I had to decline in favor of unseen possibilities, yet, apathetically reserved for me in the storehouse of Fate.

There is subject matter for the thoughtful doctor to ponder in the rueful stage of my pilgrimage in New Orleans, for, it clearly demonstrates the formidable difficulty of preserving stable security against temptation. All the demimonde and ordinary private women of New Orleans might have exerted their wiles to lure me from rational propriety in vain; and, had I found only what I expected to meet in the house of my undoing—a public woman under the false colors of being the neglected wife of a wealthy man—the story of my wretched adventure would have been an untold investigation. Yet, the startling revelation of a woman endowed to be the queen of any thousand collected at random from the better classes of social life disarmed my defensive battlement completely, forcing me helplessly to surrender at discretion. It were vain and idle, though, for the reader to imagine that he would have escaped the ordeal unscathed. All that hapless lapse from duty has caused me to suffer of distressful regret notwithstanding, I should not venture within the radius of the spell-charm of like temptation even this night—and here

I am, with one foot in the grave, as it were, and the other on the slippery margin. Nor would ten men in a hundred of the best of you be more secure than I am this hour.

Men are men, the world over, whether in savage barbarity or the efflorescence of refined

civilization. And women are their enchanting attractions, nobly honorable or however else they may recklessly elect, ere they descend beneath the dignity of well-dissembled propriety.

(To be continued.)

Leprosy in the Philippines

Experiences With the Disease Among the Savage Mountain Tribes

By THOMAS E. MOSS, M. D., Kevil, Kentucky

Formerly Surgeon in the Philippine Constabulary, and later District Health Officer in Northern Luzon

EDITORIAL NOTE.—Doctor Moss is an old friend, and this record of professional experience and hair-raising adventure will be welcomed by all our readers. It will be concluded in May, but is to be followed by other "stories" of Philippine medical life.

DURING my stay in the Philippine Islands, leprosy was one of the problems that confronted the government, the same as other affairs of state, and as district health-officer and surgeon in the Philippine constabulary—each position held three years—it was part of my duty to help in diminishing this evil by taking in charge all lepers I might discover.

When the United States took over the islands, lepers were scattered all over the archipelago, very little attempt having been made to segregate them. It costs a great deal of money to collect lepers and care for them, and it seemed that the Spanish government did not govern the islands with a view to spending money, but rather had tried to gather in as much of the country's wealth as it could.

The representatives of the United States government did not handle the leper-question as it should have been; for, besides the great expenditure of time and money, even lives are lost in fighting this disease. There were plenty of lives at the disposal of the government, but not a great deal of money. So, we had to do the best we could with the sums annually appropriated for the purpose of segregating the lepers.

Twice a year we would scour the country for people afflicted with this malady, and, whenever we found a person whom we suspected, it was my duty to send him to the nearest leper-camp, which generally was situated along the sea-coast near some port. After as many suspects as I could find had been collected, the leper-boat cast anchor a little way off the shore, and I put them all on board and then microscopically verified my diagnosis; this being done by taking a little

blood from the ear and scrapings from the septum of the nose and staining the smears. If the diagnosis proved correct, the leper was taken to the leper-colony on the island of Culion in the southern part of the archipelago.

The leper-colony at Culion is the best-situated and best-cared-for place of that kind in existence, I believe: I know one could find no more picturesque place in the world. Nothing has been spared to make life, or rather what is left of life for these poor afflicted ones, as bearable as is possible. On this island has been built a large hospital where the victims are treated, sometimes even cured, it is said. Large, comfortable houses are provided, and by just glancing at them one would think the settlement a fine, prosperous city; and even on close inspection we might not recognize it as a colony of lepers; for, many persons are sent there in the first stages whom one, not familiar with the disease, would think perfectly healthy men and women, some of them showing no outward symptoms; yet, if allowed to be at large they would infect others. These slightly affected individuals are just as capable of doing things as if not afflicted; hence, the government has allowed them to have a municipality of their own, electing their town officials just as they do in other parts of the islands.

Of course, restrictions are placed upon the lepers, and those in an advanced stage are not allowed to mix indiscriminately; but otherwise they are treated like ordinary people and live out their lives far better than if left to themselves among their people, for they would be hiding and dodging and be hard pressed trying to keep from starving. Nevertheless, the Filipinos try to hide them from the officials as long as they can, for they are

fatalists and say, "We can die but once, and that will be when God sees fit to take us."

The kin of a leper, if he be a prominent person, if taken in, will bribe the guards at the concentration-camps to let him escape; when he will be comparatively free until the next crusade.

This has occurred again and again, and it was the most annoying thing with which I

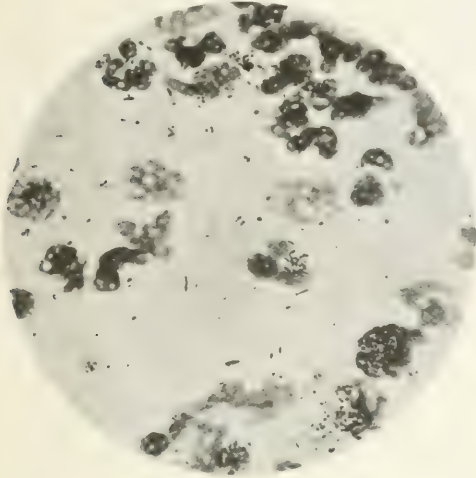


Fig. 1. Enlarged microscopic field, showing bacillus leprae

had to contend. The bribe-money paid sometimes was considerable—100, 500, or even 1000 dollars. Many, many guards succumbed, and consequently many lepers escaped. I hardly could blame these people, for, if you were to see your father or wife or daughter placed in a leper-camp and know that you never would see them again, you yourself probably would give all you possessed to get them free; if only for a few months. Many a time some young girl, who looked just like any other girl to the untrained eye, would have to be sent away, for probably in a few months' time she would be a loathsome thing and would have infected many others.

Getting Acquainted With the Malady

I remember well the first time it became my duty to examine a leper—it was soon after I reached the islands. At that time I was surgeon in the Philippine constabulary, in which capacity I did not have anything to do with lepers unless they were in the service. I had never seen one and did not know anything about leprosy; so, when I received orders to go to Aparri, to examine a lieutenant at that post, I got out my books and read up on leprosy, and learned how the victim pre-

sented overhanging eyebrows, with skin covered with nodules and unsightly ulcers, different-colored spots that were anesthetic, general facial expression of the lion (whatever that may mean), and other marks.

Fortified with this book-knowledge, I boarded a river-steamer for Aparri. The lieutenant in command of the post was a half-Spanish and half-Filipino mestizo, a fine, intelligent, and, so far as inspection revealed, a very healthy man, excepting that his back showed some small brown-pinkish spots. Now, according to my book, these spots ought not to have had any feeling in them; however, when I stuck a pin into one of them the man came very near jumping out of the window. So, I pronounced this man free from leprosy. He was a leper for all that, and shortly was sent to the colony at Culion. This shows that books are not everything one needs for the diagnosis of disease.

This was the first and the last leper who ever got by me from that day until the day I left the Philippine Islands; for, soon after



Fig. 2. Earliest stage of leprosy.

I had examined this man I asked to be transferred to Manila, where I went to San Lazaro Hospital and studied the lepers at first hand and became as nearly perfect in diagnosing the disease as is possible without the aid of the microscope.

What I wanted to learn was, to be able to tell a leper at a glance. You see, a microscope would not be of very much service in the gathering in of lepers. One could not carry a microscope along in his pocket, stop a prominent man on the street and say to him: "Hold on about an hour while I get a little of your blood or scrapings from the septum of your nose; I want to make a microscopical examination to see whether you have leprosy."

If any blood were drawn in such an instance as this, I am very sure that it would not be that of the suspected leper.

In this hospital course, I learned to tell by a sort of sixth sense whether a person had



Fig. 3. A pronounced case of leprosy.

leprosy or not. Thus, the nearest infallible sign of leprosy in its incipency in an inhabitant of the Philippine Islands is a kind of pinkish tinge of the skin, about the cheekbones and along the forehead near the roots of the hair; it looks somewhat like a slight sunburn. I do not know the cause of this, but it is the earliest sign by which leprosy can be diagnosed physically, and I never have seen the microscope fail to verify my diagnosis when I had made it upon this sunburn sign.

The Microscope in Leprosy

The discovery of the bacillus lepræ has done more to enable us to prevent the spread

of this disease than has anything else. The microscopical test verifies beyond doubt the diagnosis of leprosy in its early stages, while the physical signs vary widely in individuals and the symptoms, especially in its incipency, are almost sure to mislead anyone but an expert. Very frequently the only signs of it will be hidden by the clothing, and consist of merely a few spots of different color; for these spots are not always even of the same color. They may be found on the limbs or trunk, and the patient himself generally has paid no attention to them and does not know what they signify. I suppose this is owing to the fact that the general conception of leprosy, as learned from the Bible, is, that the name itself indicates some loathsome, horrible condition.

Leprosy always is caused by the bacillus lepræ, which is straight and rod-shaped, is a little over half as long as the diameter of a blood-corpuscle, and the ends of the rod are a little thinner than the rest of it. The bacillus stains with carbol-fuchsin after treatment with acid. It looks very much like the bacillus of tuberculosis, with which it is more often confounded than any other; not only because it resembles it, but because tuberculosis is the disease which most often mercifully terminates the life of the leper, being, one might say, grafted on to that disease.

I say "mercifully terminates," because, as the illustrations will show, these poor wretches still cling to life, with intellect sound or comparatively so, after every other sense has disappeared: taste, smell, sight, hearing, and, I might say, breathing—of course not speaking literally, for they can still get enough air through the stenosed windpipe to keep them alive. You can see this in one of the pictures: the lips and nose are gone and the eyes are nothing but empty sockets, and why this poor creature should want to live I can not fathom; but she does, and is always ready for the food when given her, although she can neither taste nor even smell it.

As said, the intellect is the last thing to disappear; and possibly this may be accounted for by the fact that rarely any bacilli are found in the brain and spinal cord, even though in other parts of the body they may appear in most amazing numbers, as, for instance, in a leproma.

I need not enter into a scientific discussion of leprosy, for one can read endless pages of that in textbooks. My aim in writing this is, to give a more or less personal experience with lepers. To begin with, I believe that the

disease is transferred from man to man through the mucous membrane of the nose and through the skin—broken or unbroken. No one knows just exactly how the bacillus gains entrance, but I think I am as nearly right as anyone. I am not afraid to take this stand, and that is more than I know of anyone else doing, for most writers give the reader his choice of the different ways in which the disease is or may be contracted. I do not think leprosy can be inherited at all, although the tendency may be, just as one may inherit the tendency to tuberculosis. I take this stand, because I have seen a leper whose family history precluded the disease entirely for generations back as far as could be traced. And in most instances it is the children who develop the disease first, the parents showing it later, or, in many cases, not at all.

Leprosy Among the Wild Tribes

In the Philippines, leprosy is not confined to any part of a given island—it can be found



Fig. 4. The Philippine leper colony at Culion.

on the coast and upon the highest mountain. The wild tribes are affected as well as the Christians; the Christians live on the coast and the wild tribes in the mountains. If anything, the wild tribes present the worst cases. I think this is because they live more in the open and are stronger than the Christians, consequently they live longer and show the ravages of the disease in worse form than the Christians, whose life is not so long, as a rule. There are more diseases down on the coast among the Christians to end their suffering, such as cholera, which rarely gets up in the high mountains, and beriberi, which is seen more often down on the coast, where the Christians can get rice, which has been polished; whereas, up in the mountains the wild tribes raise their own rice, and when that gives out eat "camotes" (sweet potatoes).

I have seen lepers in the mountains who were so badly affected that the whole surface of the skin was covered with sores, ulcers, cracks, knots, thickened rolls, nodules, and every other kind of skin affection that goes with the disease; yet, these men would be fairly strong and if not very carefully watched and guarded would escape and go back to their mountain homes. The most striking instance of this is brought to mind as I write.

I was at this time district health-officer of the Mountain Province and was stationed at the capital town, Bontoc. This town is right up in the heart of the interior, eighty miles from the coast, and a steady climb at that. I had a hospital, and was building a larger one at a cost of fifty thousand dollars. Before I went to Bontoc the wild tribes would not have much to do with medicine,



Fig. 5. A leper policeman at the colony.

but they knew me and had every confidence in me, because while I was surgeon in the constabulary I had gone among them a great deal, as I would go from place to place where the soldiers were stationed. And once when on a trip I had operated upon a chief and saved his life. So, after I came to Bontoc to stay and equipped a small hospital, the wild tribes would bring their sick in for me to treat, or, if they had an epidemic in their towns, I would go to the place and help them get rid of it.

As a matter of fact, these people did have epidemics, one especially bad, which, for lack of a better name, I called "rice-cholera," although it was not cholera; in some instances it was worse, if anything. Thus, for instance, a person might be engaged in some kind of work and all at once would begin to void pure blood; or in the other form, would discharge a thin, slightly tinged liquid. In the former, he would be dead in an hour; in the latter, he would get well if given a little medicine. I never did find out what this disease was.

In traveling among these wild people, I kept my eyes open and located a good many lepers; so, whenever I got ready to make a shipment, I had a goodly list to choose from. I had two men from the Bontoc Igorote tribe whom I had trained in the hospital; and I had them appointed deputy marshals, so they would have power to arrest anyone in the province. These men I would take with me and go to a town and arrest a leper, or, often I simply sent the two Igorotes.

Of course, I did not send them alone, except to near-by towns; I never sent them to a town where there was danger of their being killed. If I had to get a leper out of one of the dangerous towns, I took the two natives and a squad of soldiers. I did not have to do this very often, for these savages know what the disease is, and if they know that the leper certainly will be caught they are glad to have it done. Still, they do not take sides until the leper is secured; for, if they did, and the leper got away, he probably would return and kill someone who had betrayed him. But, to return to the leper who was so badly affected.

The Escaped Giant Leper

Through my secret service, I learned of an Igorote in a town far up the gorge in the range of mountains near Bontoc. This man was reported to be a very large and fierce savage, who had built a house a half mile from the others and lived by himself, afraid to trust any of his people and very much feared by them. I had never been to this

town but once and did not relish the job of capturing this fellow, but finally took my two Igorote hospital-men and two soldiers and started out over the range of mountains away from the town where he lived: I went up over the range and approached the town from the rear. It took us all night to make the trip and we just had time enough to slip up and get under the house before daylight.

We had barely taken up positions, when the leper came down the little ladder which serves in lieu of a doorstep. He suddenly found himself hedged in by two spears and two bayonets. I thought that in all probability we should have to kill him and was not taking any needless chances; but the man was so surprised and frightened that I could hardly keep him from taking me up in his arms as he begged me not to let the soldiers kill him.

He certainly was a terrible sight; he looked like a gorilla, and could have as easily picked me up as he could a child, if he could have gotten to me, but the spears kept him back. Still, he threw himself upon the ground and hugged my feet. He was covered from head to foot with every kind of leprosy sore I ever saw; his skin looked like a crocodile's hide; the skin on his face and forehead hung in great folds and gave him a most ferocious look; his feet were cracked open in great seams through which the raw flesh shone. After I had gotten a good look at this monster, I did not blame the people of his town for being afraid of him and afraid to tell of his being there.

I finally made him understand that I should not let the soldiers kill him if he would come along without making any trouble. We took him to Bontoc, where I had another leper, and after letting him rest a day I started him out down to the coast in charge of four Bontoc police. It was eighty miles down to the coast where I intended establishing my leper-camp. I gave the police a letter to the lieutenant-governor, who had his headquarters in the city of Tagudin, asking him to put me up a temporary shelter on the seashore a mile out from the city. I told the police to take the leper to that spot and that three of them were to stay there while the other went to the city to see the governor, who would send out two soldiers to guard the lepers. Instead of obeying instructions, the police went to the seashore, arriving there at dusk, and put leg-irons on the lepers and left them, while they went on to the city. They soon found congenial friends and decided it would be all right to wait until morning to see the governor.

The next morning they obtained the guard of soldiers and went back out to the seashore, but found that the big leper was gone and the other one was dead. They searched the country for miles around, but could find nothing of the escaped patient; they hunted for him for three days, coming back up the trail where they expected to find him at any moment, for he had double leg-irons on and could not possibly travel very fast. There is only one trail leading up into the mountains from here, and it was not possible for him to climb the mountains any other way with leg-irons on. The only chance, as the soldiers figured it, for the leper to avoid them was, to travel slowly along and hide near the trail when he saw them coming. So, in this way, they spent five days in hunting this leper. They finally reached Bontoc and reported to me the escape. Thereupon I sent word to his town, and you can bet the people felt mighty uneasy; they sent me word,

please, to find and kill him, for they knew he was making his way back to revenge himself upon them for betraying him, though they were innocent.

Twenty miles up the coast from Tagudin is a city from whence a trail leads that intersects with the Tagudin trail, forty miles up in the mountains near another town. So, I decided to go down this trail and from there back down the coast to Tagudin, and found the giant ten miles up in the mountains. He had hobbled thirty miles, moving the distance of one foot at each step, with nothing to eat, or to sustain him except his determination to get back to his home town and kill all the people he could for (as he thought) having betrayed him. The poor fellow was dead, lying with his distorted feet in the water of a little mountain-stream. The leg-irons had cut into his swollen flesh until they were buried in it.

(To be concluded)

Electronic Diagnosis

The Electronic Theory in the Interpretation of Disease

By GEORGE STARR WHITE, M. D., Los Angeles, California

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II

IT IS many years since the medical profession has shown such interest in any new discovery as it has in electronic diagnosis, first discovered by Dr. Albert Abrams of San Francisco. It is not the novelty of the method that interests the progressive physician, but the great field opened up to him. To be able to diagnose, at the very beginning, tuberculosis, carcinoma, syphilis, pus formation, and so on, and not have to rely upon doubtful laboratory methods, is almost beyond comprehension or belief.

In teaching the system of electronic diagnosis, we have found that percussion is an art not well understood by the average doctor. The percussing out of the heart, liver, spleen, and so on, can be done well, but when it comes to percussing out areas of different tensions many are hopelessly at sea.

Before being competent to diagnose a diseased condition by the electronic method, one should practice until certain changes in visceral tension (called by Abrams "visceral reflexes") can be positively determined. "Nothing of value is gained without effort"

applies to becoming proficient in percussing as much as in any other medical work.

One must be exact in every detail. A change in the position or tension of the hand that is next to the subject being percussed will change the note. The stroke must be uniform for any special observations.

In our first paper on this subject, which appeared in the November issue of *CLINICAL MEDICINE*, we illustrated and described a plexor and pleximeter that could be employed by those who could not use the "finger-finger" method. For some of our most recent discoveries in this work, those instruments are not as good as another device we are about to describe.

In the fifth edition of Dr. Albert Abrams' work, "Spondylotherapy," he mentions the fact that the pleximeter-finger *must* be very rigid and the distal phalanx bent dorsally. In Figure 1, is shown the hand in an easily extended position. In Figure 2, the same hand is shown "flexed dorsally" or "hyper-extended."

To do this new work, one must practice forced extension of the fingers of the plexime-

ter hand—generally the left hand. After a few weeks' diligent practice, one will be surprised to see how much power can be cultivated and how far the fingers can be bent backward. At first the hand will become very tired, but after a few weeks the hand can be kept in this position of forced exten-

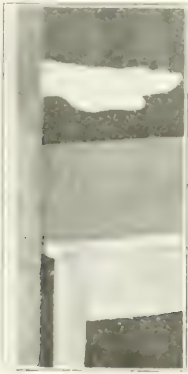


Fig. 1. Showing the positions of the hand prior to percussion.

sion for an hour at a time without any inconvenience.

Figure 2 shows a thimble on the second, or pleximeter-finger of the left hand, and one on the first, or plexor-finger of the right hand. Most colleges teach the use of the second finger of the right hand for plexor; but, for reasons given below, we advise the use of the index-finger.

The Thimbles

We have observed that the best percussors have the pleximeter-finger calloused between the middle and the distal joints, and also the end of the plexor-finger is calloused and very hard. As we do not all have fingers alike, and to facilitate the acquiring of a uniform stroke, we tried all sorts of material for finger-ends and for finger-shields. We finally tried celluloid or bone thimbles, but the adventitious sound of the hollow space between the finger-end and the thimble bothered us. We tried filling the end with wax, but that did not answer.

We then discovered that a weight in the thimble aided in the stroke and sound. We melted beeswax and filled the thimbles half full and filled this wax with birdseed-shot. As the wax cooled, we put the thimble on the finger on which it was to go, so that it was fitted to the finger while the wax was cooling. We use the largest white celluloid thimble we can find. The weighted thimble on the pleximeter-finger aids in giving resistance to the

finger and in keeping the end bent away from the body being percussed.

The loaded thimble on the plexor-finger makes the end unyielding and helps in bringing out a sound that is easily recognized in careful, differentiating work.

How We Percuss

We use the index-finger for the plexor-finger, because all have more control over that than over the other one, and also because a finger movement only often is sufficient to elicit the delicate sounds that we want brought out. A wrist movement can be used when needed; but, for delicate work, the finger movement and staccato touch of "feather weight" is all that is required.

Figure 3 shows how we hold the hands in percussing. The pleximeter-finger should be horizontal and touch the body of the subject so lightly that it can be moved about without any friction on the skin, yet feel the talcum powder we dust over the abdomen.

At first the pleximeter-finger will be very sore and a day's rest will be required, but after a few days it will be calloused in the space between the middle and distal knuckles, and percussing for several hours will not affect it.

How to Proceed

The work should be done in a room with subdued light. Sunlight or electric light, if shining upon the subject or if too near, will



Fig. 2. The over-extended hand and pleximeter finger ready for percussion.

change the reflex. There should be no bright colors in the room and no colored shades or curtains to alter the white light in which we must work. Highly colored clothing must be removed and not be near the subject. White or black clothing is the best to have near the operator or subject.

The subject must stand erect and the abdomen must be bare from just below the breasts to midway between the pubes and umbilicus. The room must not be cold enough to chill the body. Some like to wear a jacket, but that depends upon the conditions.

Grounding the Subject

Figure 4, as well as some of the other photographs, shows two pieces of aluminum 12 inches square. One of them is grounded by a chain to a water-pipe or gas-pipe, and the other is attached to the grounded piece by a chain long enough to allow the *patient* to stand on it and not touch the subject percussed. Some think the floor is ground enough, but for some of the delicate work mentioned below the grounded metal is necessary. For all this work we advise the grounding of both subject and patient.

The Magnets

Figure 5 shows an 8-inch "horseshoe" magnet in a mortised block, and two heavy bar magnets in a block which is bored out and

has a piece of steel set into its bottom. In this way, the bar magnets are bonded at the bottom of the block. When they are placed into the block, opposite poles down, they

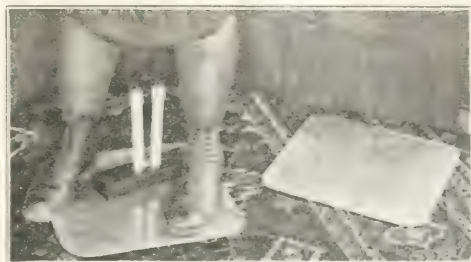


Fig. 4. Patient stands on "grounded" aluminum plates.

form a "horseshoe" magnet. The upper ends of the bonded bar magnets have a brass wire bale attached by means of adhesive plaster. By yoking the upper ends of the bar magnets, and also bonding the ends of the "horseshoe" magnet with a piece of iron, their strength is preserved and they do not exert much magnetic influence in the air about them. Note that the brass bales on the bar magnets are on opposite poles, namely, one bar has the bale on the N pole and the other has it on the S pole.

Any magnetic bar used should be standardized by finding how near it must approach a compass needle to deflect it. A magnet

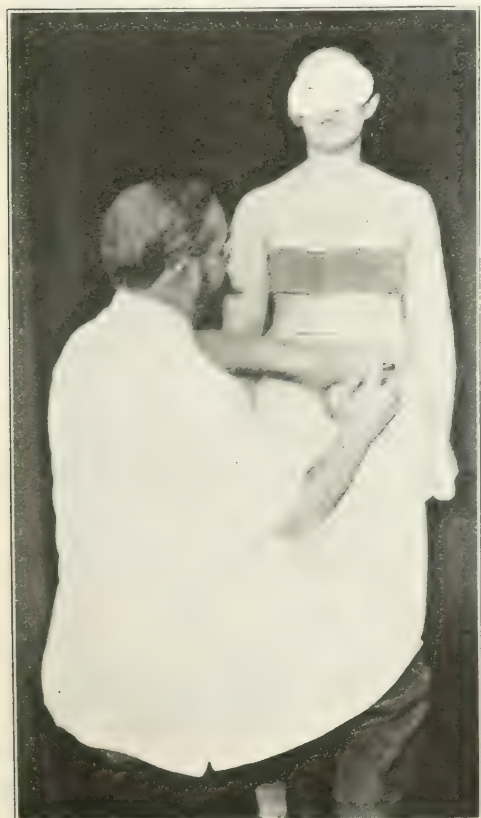


Fig. 3. Showing how hands are held when percussing.



Fig. 5. The magnets used in this work.

causing deflection at 6 inches is better for this work than one causing a deflection at 6 feet.

The distance so found is about the distance it should be from the subject.

Always try the magnet to see which is N and which is S. Do this by means of the

compass needle. This is very important as some bar magnets are wrongly marked.

The Magnetic Meridian

We have recently discovered that the tension of the viscera is greater when the body faces due north or south than when



Fig. 6. Patient in position on metal plate. Bar magnet on table.

facing east or west. The first dull or "near-dull" place we find, when percussing the abdomen for the stomach-reflex, we call the "working-line." The subject must stand facing east or west when getting the normal "working-line."

Within from one-half minute to three minutes after a person turns due north or south from due east or west, the tension of the viscera is changed. Below we explain how we prove this marvelous phenomenon.

How to Obtain the "Working-Line"

Our first paper on this subject briefly explained that we followed the method of Doctor Abrams in obtaining our "working-

lines," but to make this paper more complete we shall repeat some of the instructions given.

Figure 3 shows the subject, standing on grounded aluminum, facing east or west. With the left, or pleximeter-hand just touching the talcum-dusted abdomen, we begin well below the umbilicus on the right side. (Be sure that the pleximeter-finger is horizontal.) The loaded, celluloid thimble is on the pleximeter-finger as well as on the plexor-finger.

By tapping with a "feather stroke," we lightly percuss the pleximeter-finger with the plexor-finger. We slowly move the left hand up on the abdomen, tapping evenly as we proceed. Somewhere within from 1 to 2 inches above or below the navel we shall note a "near-dull" note. Repeat the procedure quickly and, if sure of the sound, mark the abdomen at the *under* side of the pleximeter-



Fig. 7. Position for viscera reflex.

finger with a dermatograph. This is our "working-line" on the right side of the subject.

We proceed in the same manner on the left side. The "working-line" on the left side may or may not be parallel with that on the right side. This "working-line" indicates the "near-dull" sound obtained at the lower



Fig. 8. Another position for visceral reflex.

border of the liver. We rarely find it in the same location, with regard to the umbilicus, on two different subjects, and it changes very often in the same subject. We always find our "working-line" for each test, no matter whether the subject has been "marked" only a few minutes previously.

How to Elicit the Visceral Reflex

The N-S and E-W (north-south and east-west) lines should be accurately marked out on the working-room floor; or, cords may be drawn across the ceiling, to indicate the points of the compass. The "working-lines" are obtained while the subject stands facing due east or west. Have the subject turn due north or south, then, after about half a minute, proceed as in obtaining the "working-lines."

Begin on the right side. The "near-dull" note will now be found about a finger's breadth *below* the "working-line" on the right side, and from one-finger's to three-fingers' breadth below on the left side. Mark these positions with the dermatograph. Now let the subject face east or west again and after a half a minute or so percuss. The "near-

dull" position will have returned to the original, or "working-line." This proves that the magnetic meridian exerts a very pronounced influence on the animal economy.

The Use of Magnets

Test each bar magnet with a compass to see if "N" means north or south. They are not all marked alike. The north or positive pole of the bar magnet repels the north seeking pole of the needle, but attracts the south seeking pole.

Figure 5 shows how magnets, when not in use, should be kept in the room where the tests are made. Having proved that the human organism is influenced even by the magnetic meridian, it illustrates how a magnet in a room may change the reactions in electronic diagnosis. When employing one bar magnet in this work, the other should be kept in an upright position at least three feet distant from the subject percussed.

The blocks shown in Figure 5 are 1 1-2 inches thick, 2 1-2 inches wide, and 8 inches long. A piece of iron 1-4 inch thick is mortised into the bottom of the block containing the bar magnets, and they rest on it—*opposite poles down*.



Fig. 9. Change in dull point of liver elicited in this position.



Fig. 10. Another experiment for eliciting reflexes.

The N pole of the bar magnet gives off *positive* energy, and the S pole gives off *negative* energy. When the N and S poles point in the same direction (as shown in Figure 5) and the yoke or band is removed, neutral, or isoelectric energy is given off.

With the subject standing on the grounded aluminum as before, but facing due east or west, place or hold a bar or horseshoe magnet at right angles to the abdomen and on a level with the umbilicus, as shown by the stand in Figure 6. Proceed as when the subject was standing due north and south. The "near-dull" region will coincide with the lower mark on the abdomen, or it will be a little lower, depending upon the strength of the magnet used.

With the face east or west and neutral energy from the magnets (opposite poles up) between the feet of the subject, as shown in Figure 4, the stomach and liver reflex (dulness elicited lower down on abdomen) is obtained.

If the subject face north or south, with the magnets between his feet (neutral energy),

there is no visceral reflex (dulness of stomach not elicited).

If the subject face north and the S pole of the bar magnet be directed (south) to the forehead, as shown in Figure 7, the visceral reflex is obtained; but, if the N pole be directed south (to the forehead), no reflex is elicited.

With the subject facing south and the N pole of the magnet pointing west, as shown in Figure 8, or, with the magnet lower down toward the abdomen, there is visceral dulness; but, if the S pole be employed, there is no reflex.

If the horseshoe magnet (neutral energy) be suspended over the spinal column of the subject (Figure 9), who may face in any direction, the liver and stomach "near-dull" line is *raised* about a finger's breadth *above* the "working-line." If the face be north or south and one of the bar magnets be used instead of the horseshoe magnet, with either pole pointing over the spinal column, there is "elevated dulness." If the subject face east or west and either the N or S pole of the magnet point directly over the spinal column, the visceral reflex is obtained.

If the subject face north or south, with either pole of the magnet directed over the



Fig. 11. Showing how positive energy is given off from hands.

spine and either pole directed east or west, as shown in Figure 10, no visceral reflex is obtained.

If the subject face east or west, with either the north or the south pole of the magnet directed over the spine and the S pole of



Fig. 12. Another person is behind the screen.

another magnet, as shown in Figure 6, there is no reflex; but, if the N pole be substituted, there is a visceral reflex.

These and many more reactions with the magnets we have worked out on a healthy female subject. If a diseased condition exist, we observe that a definite magnetic reaction obtains. Dr. Albert Abrams' work on "Human Energy" enumerates many diagnostic points, and we, who are using these methods, are daily discovering new facts to simplify and strengthen the work.

Human Energy to Produce the Reflexes

Figure 11 shows how the visceral reflex may be obtained by a second subject pointing at the subject percussed. As before stated, both subjects must be grounded. Either the right hand of a normal female or the left hand of a normal male will elicit the reflex. We have found that aluminum thimbles on the fingers strengthen the reflex.

If the subject in Figure 11 be facing due north or south and the right hand of a female or the left hand of a male be pointed as illus-

trated, a reflex is obtained. The energy from the N pole (positive end) of a bar magnet will have the same effect. This proves that the energy given off from the hands above named is positive energy. The same can be proved by the use of the bar magnets, since opposite poles equalize the energy and like poles augment the energy. (This was explained in our first paper in the November issue of CLINICAL MEDICINE.)

Figure 12 shows how a patient can be placed behind a screen and an assistant place one end of a conductor on the part to be diagnosed and the subject hold the other conductor-end in relation to the stomach. Note how patient and subject are grounded. The



Fig. 13. Patient is used as the subject.

patient may sit, but the subject being percussed must stand.

Figure 13 illustrates how a patient may be used as the subject. She is shown holding a magnifying energy-conductor to a supposed beginning tuberculous lesion. The other conductor-end is held on a specially arranged

stand, which also holds a bar magnet to be used in working out the polarity of the energy given off. In the former article on this subject, the energy-conductors are illustrated and the manner of their use is described.

The Influence of Colors

In our first paper on Electronic Diagnosis we mentioned the use of yellow and blue in differentiating between tuberculosis and syphilis.

That colors play a very important role in the physical world, no one disputes, but it was only of late that we had a way to prove easily that colors play an important part in the human economy. We will not go into this subject of color, except so far as it pertains to our subject, Electronic Diagnosis.

We think Dr. Albert Abrams was the first one to utilize colored screens in diagnosing disease. From the impetus given by his teaching, we have tried to go farther, and the following are some of our most recent observations. We hope others will go on with this great work and reveal to the profession all the facts possible relating to diagnosis and therapeutics along the lines laid down in these papers.

Yellow, as well as photographers' "safety-color," seems to have an entirely different effect upon the emanation of human energy than do blue or the colors of shorter wavelengths.

We mentioned above that the right hand of a normal female and the left hand of a normal male would produce the visceral reflex under certain conditions. Now we find that the "polarity" of the male and the female is reversed for an hour or more if either drink a yellow liquid, such as tea, saffron-water, orange-juice, and the like. If one ingest a red or blue substance, such as red beets or a blue coloring matter, immediately after ingesting the yellow substance, no change in polarity is observed.

Since having discovered the effects of the

magnetic meridian upon the reflexes, we have tested a limited number of persons suffering from tuberculosis and syphilis, and find that, if they stand facing due north or south, no visceral reflex is obtained. In these cases, we find that, if the disease be tuberculous, a yellow or a "safety" colored light shed on the bare abdomen will produce the reflex, and a blue light will not. If the case be one of syphilis, a blue light shed in the same way produces the reflex, while the yellow light will not. This discovery is too recent to be made the subject of a complete report now, but we mention it in order to aid others in working out diagnostic data.

In his book, "Spondylotherapy," fifth edition, Dr. Albert Abrams mentions that the sex of an unborn child can be determined by the "polarity" of the mother. This we have found to be true, but we have also discovered that, if the mother ingest any yellow substance, the polarity is changed for an hour or so. In testing polarity of persons, make sure that they have not eaten or drank anything for at least five hours prior to the examination.

Reasoning from the old writings of some observers of colors, we concluded that "colored-sunlight-water" should change the reflex. We put some distilled water in an amber bottle and let it stand in the sunlight for a whole day. We then let some men and women drink a little of this "ambereau." Within three minutes the "polarity" of each person was changed, and it remained changed from one-half hour to two hours.

This shows what an incalculably sensitive method we have at our command for diagnosing disease and observing changes in the "human energy."

The "visceral reflex of Abrams" is an epoch-making discovery in medicine, and we urge all those who can to perfect themselves in this work and thus simplify diagnosis. Eventually we hope to find new methods along these lines for curing diseases.

THERE shall never be one lost good; what was shall be
as before,

The evil is naught, is nil, is silence implying sound;
What was good shall be good, with for evil so much good
more,

On earth the broken arc, in Heaven the perfect round.

—Robert Browning.

Drug Habits and How to Treat Them

By WILLIAM F. WAUGH, A. M., M. D., Chicago, Illinois

EDITORIAL NOTE.—In view of the passage of the Federal Antinarcotic Law, it is of the utmost importance that every physician should know how to handle the addicts coming to him for treatment. Doctor Waugh has had large experience with cases of this character and gives advice which should be eagerly read by every practitioner.

THE Harrison narcotic law, with the supplementary statutes to be enacted by the states and municipalities, will render it difficult for habitues to secure supplies of their drugs. This must impel an increasing number to resort to our profession for cure. Many will resort to quacks and be skinned; for it is the nature of man to be credulous, and to trust the fellow who makes the biggest promises. For that reason the party who claims to cure the victim without suffering will get the bulk of the business.

The ideal of the drug habitue is to be put to sleep, and awake some time later, cured. That this can not be realized, and that the approximation to this ideal carries with it certain peril to life and reason, does not weigh much—the addict is not afraid of drugs and is willing to take chances with them that a sane man would not—and that an honest man would not take with a patient.

There are very great advantages in treating such patients at a sanatorium, but institutional treatment is not absolutely essential. Any average doctor *can* cure these people at his own home, and sometimes in the patient's home, although the cure can never be guaranteed, and should not be attempted except under certain conditions. These are:

Conditions Which Must be Insisted Upon

1. The patient must surrender all his drugs to the doctor, and have no possible means of securing more except through the doctor. If the latter, through weakness or carelessness, does not enforce this rule, he will surely fail.

2. Trusty attendants must be provided, who will not leave the patient out of sight a moment while he is passing through the trying period.

3. The patient must agree, legally, to submit absolutely to the doctor for the period specified as requisite for the cure; for there is a time when the patient's judgment must not be the ruler of what is to be done. If the doctor has not the sand to enforce this, he should send the patient to one who has it.

4. The compensation should be fixed and paid in advance; and no part be returnable

in case the treatment is interrupted or stopped without the consent of the physician. It is too much to let the patient feel that a failure will save him money. On the contrary he should feel that he has paid so heavily that he must be cured to get the worth of his money. Much experience has led to my insistence on this rule. Never trust a drug habitue. The one who asks for credit often intends to cheat you. In a quarter of century of treating these cases, I have never trusted one who did not swindle me, and then defame me to excuse his rascality.

Begin by a careful examination of the patient to see if he ought to be cured. If a victim of incurable cancer, let him alone. With tuberculosis, diabetes, and other affections of similar gravity, the individual circumstances must govern. Here is a type: A man had his thigh amputated, and suffers neuritic pains in the nerve-ends whenever he is free from morphine. The tumors should be excised and then the drug stopped. Until the operation is done, can anybody tell whether the man is entitled to his drug or not? We have no esthesiometer.

The state of the heart, kidneys and other organs must be ascertained first. Be careful about treating a nephritic—he may die if you are not careful.

Beginning Treatment

Install your nurse and put the patient to bed. Begin treatment by purging, and keep purging until the invariably loaded bowels are emptied. There is no better way than to give calomel and podophyllotoxin, 1-6 grain each every half hour for seven doses, then full doses of a laxative saline, the clean-out process being aided by colonic flushing with a warm saline solution. The purging must continue until the liver lets go its accumulations, and bile pours down and up by the gallon. Then the worst is over, and in twenty-four hours more the patient will begin to eat.

When the time comes for the dose of "dope," give half the usual quantity, and half the dose each time afterwards. In two days all opiates should be stopped, but after twenty-four hours' abstinence, a small dose,

usually a quarter grain, should be given, and that ends it.

Don't bother with substitutes—they don't substitute worth a cent. Just quit and be done with it. The patient will suffer merry-well—and so he should. There will be two days of torment, and then comes peace. The suffering may be lessened by several expedients. One is hot water. Put the man in a full bath-tub, and keep up the heat as high as he can bear it, leaving him there for hours, if he finds it comfortable. It aids elimination and puts in time.

Excessive suffering is mostly imaginary. Real pain is due to inefficient elimination. The theory is that the morphine itself is stored in the cells somewhere, and its use has developed an antitoxin, which keeps developing after the inhibiting drug has been discontinued. To this antitoxin the suffering is due. It is not exactly pain—patients say a real pain would be a relief. Much of it is autosuggestion—unmercifully strong with these men. The autotoxemia is real.

Drugs Which Give Relief During Withdrawal Stage

I have studied such drugs in many cases, and rarely see identical manifestations in two. I study the pulse and the pupils, and give what will restore these to normal—and it always relieves the suffering. If the pulse is feeble I give strychnine or physostigmine; if strong and full I use gelseminine; if the pupil is contracted I give atropine or hyoscine; if dilated, I know that the patient will not be able to distinguish between the effects of physostigmine and real morphine. In fact, this was so perfect a substitution in one case that the woman refused to believe she had not had morphine, and made this an excuse for not paying her bill. In other cases I have found indications for pilocarpine, solanine, quinine, sparteine, and once picrotoxin. But of all these, gelseminine covers most cases and most closely replaces morphine.

If the patient has not sand enough to bear the salutary suffering, and insists on being doped through the withdrawal period, better let the other man have him. But if you must do this, you may ease him by stupefying with chloral, sodium bromide or hyoscine. All require very careful watching. The stupefaction of bromides increases and reaches its acme about thirty-six hours after the last dose, so that you are very apt to give too much and face a peril of life. The safest of the three is the one you are most accustomed to use.

By using H-M-C you can cut the morphine faster, as a quarter-grain of morphine in this tablet gives more relief than a grain of morphine alone. To this you may add hyoscine alone, and this is safer by far than chloral or bromides. Don't give of either more than just enough to enable you to control your patient; let this be the object rather than inducing stupefaction. He may lament over suffering, but when he is over it, he will have lost all memory of suffering.

Feed regularly when the patient can retain food, using only liquids, and these hot if he can take them. Malted milk, turtle soup, clam juice, raw eggwhite in milk or water, fresh fruit juices, coffee, and anything else the patient may crave. Give about a teacupful every two hours. If he vomits, give a little anyhow.

A hot head and bright eye call for gelseminine. Of any medicine note the effects closely and do not overdose. A morphine habitue may take a scruple a day of that drug, and be poisoned by a full dose of another drug—the toleration is only for the habit drug.

Don't allow any alcohol at all.

When the patient has been without morphine two days and nights, and time for reaction arrives, aid it by a cold plunge into the tub, followed by brisk slapping and rubbing, and cover up warmly in bed. He will tell you soon that he feels as if he had had a big slug of dope; and you will not have to coax him into the tub after that—he will want and may take one every hour.

Care During Convalescence

The whole course may take a week; after which the patient is a convalescent and needs the care given to one. He will be feeble and hungry; and for a year after that, will shrink from all unpleasantness and want his drug. He should not return to his duties for a year, if such a rest is economically possible, and this vacation should be spent in the country. Then there should be no relapse. All the relapses come from returning to work too soon. The man feels so well, so hearty, so rejuvenated, that he wants to go home and make up for lost time and expenses—and the moment he faces the trials of active life without his dope he collapses. He is also very prone to autotoxemia, and his bowels require constant watching. The results of retention are disastrous to him.

Let him go on a ranch and let his mind vegetate and recuperate. Let his physiology and psychology have time to learn to work

without the stimulus of drugs, and let the vital forces flow into the proper channels. Then the cure will be permanent. But—to take a man who has for years had every nerve, every physiologic function, attuned to the morphine key, and expect him to be restored to normal function in a month preposterous!

Think of the loftiest intellect, the strongest human will, you can—of Napoleon, Roosevelt, Grant, the Kaiser—and could any of them stop the use of morphine after years of habituation, stop it unaided? No; a thousand times, no!

The above applies to all forms of opiate habit—opium, heroin, codeine.

Cocaine? Cocaine destroys the soul, leaves the victim without the moral sense. No confirmed cocaineist wants to be cured, or will

be, if he can help it. Whether he can be cured unless by killing him, I am doubtful. In fact, that seems about the best way to treat him.

Chloroform? Two cases of confirmed habit are on my records. One is dead; the other was cured, but the detail of this case is buried as in the confessional.

The treatment of drug habitues is one of the most difficult, most exhausting, and yet most fascinating, departments of medical practice.

[Doctor Waugh has devoted years to the study of the drug habits and has treated many cases of narcotic habituation. There are few men (if any) who know this subject better; therefore, if you have some "tough" cases of this kind to treat, I suggest you write him for advice.—Ed.]

Pathology and Treatment of Goiter

A Resume of the Recent Literature

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GOITER—or "struma," as it was formerly called—is defined by Dock as, in general, any morbid enlargement of the thyroid gland, although the name applies more strictly to a "chronic enlargement of the thyroid gland, of unknown cause, with variable anatomical features, occurring as an endemic, epidemic or sporadic disease." Small goiters may be caused by a strain (confinement), by injury, an infectious disease, or an inflammatory or neoplastic alteration.

Ordinary goiters are generally from two to four or five times the size of the normal thyroid gland, although they may grow to an enormous size, hanging down even to the thighs. Among the symptoms of simple goiter are the following: an upward movement of the growth when swallowing; slight pressure on different adjacent organs, causing a cough or a dangerous occlusion of the trachea; hemicrania (pain on one side of the head); nervousness; emaciation; and, according to some writers, a rapid action of the heart, with palpitation, may result from the mechanical irritation of the goiter on the nerves of the heart.

Pathology

Recent writings of medical authorities on the subject of goiter tend to show that a

simple goiter may develop into an exophthalmic one; in fact, there is great danger of such an occurrence. Further, Dr. L. B. Wilson says that either of the two principal types of simple goiter—the diffuse, or parenchymatous, and the nodular, or encapsulated—may become cystic or cancerous. In his article he says:

"In considering the relationship of the pathology of exophthalmic and simple goiter, we are apt to be blinded by our old teachings that the two are always distinct entities. Though this has been disproven clinically over and over again, we find every once in a while some one writing learnedly of either the diagnosis or the pathology of the two diseases, as though they never in the same individual changed from one to the other. As a matter of fact, close inquiry will, in a very large percentage of cases of simple goiter, reveal symptoms which are unmistakably those of exophthalmic goiter, and, conversely, *if the patient lives long enough*, every case of exophthalmic goiter is hypothetically destined, in the order of pathologic degeneration, to become a case of simple goiter.

"In examining cases of so-called simple goiter, for exophthalmic symptoms, we must get completely away from our old teachings that exophthalmos is a *sine qua non* of Graves's

disease. The disturbed nervous, metabolic, and muscular phenomena are quite essentially diagnostic. Looked at from the clinical standpoint, then, a case of Graves's disease is one with an enlarged thyroid gland and exhibiting symptoms of too much absorbed secretion, while a case of simple goiter is one with an enlarged thyroid gland, but exhibiting no such symptoms." (See the June 1909, number of *Surgery, Gynecology, and Obstetrics*, containing Dr. Wilson's article, for other articles on the subject of goiter.)

O. S. Hillman, in a recent paper on "The Pathology of Exophthalmic Goiter," says:

"In recent years, the clinical evidence, especially that derived from surgical treatment, tends to support the thyrotoxicosis hypothesis, while at the same time the evidence deduced from pathologic anatomy, chemistry, and pathologic physiology rather suggests that the thyroid gland does not play a primary role in the production of the clinical manifestations. In fact, some authorities believe that the thyroid gland is only secondarily involved, and that there is some primary determining factor, either of a chemical or a nervous nature, at work.

"The consensus of opinion is in favor of excessive secretion of the gland as causing the typical signs of the disease—tachycardia, exophthalmos, enlargement of the thyroid gland, tremor and nervousness. This opinion is substantiated by: (1) The cure of the symptoms after partial thyroidectomy, and (2) the production of some of the most striking symptoms by the administration of too large doses of thyroid extract to previously healthy men or animals. But the question naturally arises, What is behind these conditions? This is difficult to answer, as the true nature of the alteration in the internal secretion of the gland is largely a matter of conjecture."

Further, the same writer says:

"From the standpoint of gross pathology, the gland is usually larger than normal; but, as stated above, it may be practically of average normal size, or even smaller than normal. Vascularity is marked, and this is frequently a source of danger during an operation, as the vessels coursing over the surface of the glands are usually very large. A noticeable feature is the cut surface of the gland, which is drier and less viscid than normal. The important changes are, increase of parenchyma and stroma, with diminution or almost complete disappearance of the colloid and alteration in its quality."

L. B. Wilson of the Mayo clinic, writing in February, 1914, on the pathology of the thyroid gland in toxic, nonexophthalmic goiter, gives the following general summary of results from investigations of several hundred cases:

"1. The pathology of the thyroid in true exophthalmic goiter is essentially a primary parenchymatous hypertrophy and hyperplasia, i.e., an increased amount of functioning parenchyma associated with an increased absorption. The process is an acute one.

"2. The pathology of a toxic simple goiter is marked, essentially, by atrophic parenchyma, decreased function, and decreased absorption. The process is a chronic one.

"3. The pathology of toxic-nonexophthalmic goiter of clinical group 2 (i.e., those resembling exophthalmic goiter) is one of increased parenchyma through generative processes in atrophic parenchyma or the formation of parenchyma of the fetal type, with an increase in each instance of secretory activity and of absorption. The process is a chronic one, but sufficiently active to cause the patient to consult a surgeon earlier than do those cases in clinical group 1. (Cardiovascular variety.)

"4. The nearer the cases of clinical group 2 (toxic-nonexophthalmics) approach, in age and symptoms, true exophthalmic goiter, the shorter the duration of the period of goiter before operation, and the smaller the average weight of the gland at the time of its removal.

"5. The cases of toxic goiter of clinical group 1 (i.e., those in which the symptoms are of the cardiovascular variety) much more closely resemble cases of simple goiter in their pathology in all respects than do the cases of clinical group 2. A large number of them are of colloid-goiter type, the enlargement of the thyroid gland has existed for a longer period before operation, and the portion of the gland removed is materially larger than in those cases of clinical group 2.

"6. Finally, it may be stated that all the above pathologic evidence points to a constant relative association of increased secretion and increased absorption from the thyroid gland, proportional to the degree of toxicity on the part of the patient. We have as yet no absolute proof that such secretion and absorption is the cause of, rather than co-ordinate with, the symptoms, but the presented evidence strongly points to that conclusion."

Dr. George Dock considers simple goiter as usually a chronic disease, adding, in his

prognosis, the opinion that acute, or small parenchymatous chronic goiters that have not undergone degeneration, may be cured by medicinal treatment or by the patient's moving to another locality, and by boiling or changing the drinking-water. In old goiters, he says, "the course depends upon the position (not the size) of the tumor; also upon whether or not there is any pressure upon the trachea, esophagus, nerves, and veins; and the occurrence of change into an inflammatory or malignant condition. Increase of pressure may cause death from tracheal stenosis or heart disease, and this pressure may arise from sudden hemorrhage into the tumor or from the increased growth of the latter.

Dr. F. B. Cross says, in a recent article, that simple goiter appears at puberty and is more frequent in females; in fact, he states that he has never seen a case in a male. He says:

"The glandular enlargement is generally bilateral, in some cases the right lobe showing the larger increase; the enlargement may be nodular. The gland structure is firm but elastic and is distinctly not fibrous. I am unable to account for the development of simple goiter, though it has been variously attributed to drinking-water; this in special localities where goiter is common—northern New York, for instance. Virchow's statement that there is a tendency to thyroïdic overgrowth because of the very marked blood supply provides a possible explanation. The treatment is nonoperative; iodides for a long time, iodine locally over the gland, and a change of drinking-water. With this treatment, Kocher states, he expects 90 percent recoveries of cases in children."

The Treatment

Dr. E. M. Rininger, writing in February, 1911, on the treatment of goiter, says regarding one form of simple goiter: "The regular rounded-out gland of young girls in puberty is a sort of hyperplasia and is different from the round, cystic tumor, and nineteen out of twenty get well without much of any treatment."

Dr. George Dock, in his article on goiter, published in October, 1909, says that the simple goiters require treatment with iodine, and that this remedy evidently is a sort of specific for the large proportion of goiters. He writes as follows regarding the medicinal treatment.

"In small, parenchymatous goiters of recent development, the results of iodine treatment are almost miraculous, and even the most minute quantity, as by the external

application, suffices. . . . In regard to the choice of external and internal administration, I think that the latter is always to be preferred, and that external applications, if used at all, should never be carried to the point of causing blisters or permanent pigmentation.

"The method of choice is the administration of iodine in solution, alone or in combination with an iodide. As excretion is slow, accumulation should be avoided by either giving small doses or intermitting the treatment, or both. From 5 to 20 minims of Lugol's solution may be given three times a day, every other day. Many cases, even of large goiters, will subside in two weeks under this method. Others require a longer time. Thyroid extract has no advantages over iodine preparations, but many disadvantages. Roentgen-rays often cause reduction of the goiter, but often fail. Injections sometimes are useful, but are as dangerous as operations. Patients should not drink water unboiled, and in goiter-regions all drinking-water should be boiled."

Dr. H. M. Snow, writing, in 1910, on the treatment of goiter, cites a case of small simple goiter in a young girl, which he treated by using first the radiation from a small incandescent lamp, followed by gentle vibration; while in addition the mercury-biniiodide ointment was used locally. Under this mode of treatment, the tumor nearly disappeared and the patient discontinued treatment.

Snow also cites a case of medium-sized, soft goiter which was treated with an ointment of mercury protoiodide (about twice as strong as the ointment used in the case cited above), and which was treated by him at his office with vibration followed by current from the resonator; no ointment, however, being applied to the tumor. In spite of very irregular treatment, the cure was perfect.

Snow's conclusion, from the above and other cases in his experience, is that the combination of some form of iodide of mercury and an electric treatment gives the best results in such instances. As a whole, he expresses preference for the biniiodide over the protoiodide of mercury, and adds: "The current from the Oudin resonator, using a vacuum electrode, was used in most of the cases, supposedly driving in the iodine by cataphoresis, or, perhaps, by anodal pressure of the high-potential current. This has seemed the most satisfactory procedure of all in my hands and the steady diminution of the goiter from week to week most gratifying." The vibration he

uses as a preliminary treatment to soften the tumor and thus render it more easily influenced by electricity.

Reference to a recent article by Dr. Graham Chambers (May 1911), on simple goiter and its treatment, will show that his opinion as to the value of thyroid extract in this disease is distinctly opposed to that of Dock (previously quoted). He regards the type of goiter occurring at puberty as especially amenable to medicinal treatment, and, from his own experience, considers thyroid extract of especial therapeutic value in those cases of simple goiter. Of eight cases treated by him

disappear, he offers the following interesting observations:

"The thyroid gland secretes an internal secretion, which takes an important part in metabolism, especially of proteins. If one feeds a human being or a lower animal thyroid extract, the urea output in the urine is increased; and, if one feeds some of the lower animals on a pure meat diet, the thyroid gland enlarges. The question naturally presents itself: Is the enlargement of the thyroid gland, such as occurs in goiter sometimes due to a stimulus resulting from defective metabolism?"

This seems to me to be a probable explanation," because it affords an explanation of the frequent enlargement of the thyroid gland at puberty and during menstruation, pregnancy and lactation, as protein metabolism is generally increased in these states. It also explains why the exhibition of thyroid extract is of value in the treatment of simple goiter occurring at puberty, inasmuch as the administration of the drug removes the cause of the enlargement.

"Another theory of the origin of goiter is, that the cause is a stimulus resulting from autointoxication. This presupposes that the thyroid gland has for a function the neutralization of poisonous substances absorbed from the intestine or possibly formed during metabolism. This latter view," Chambers adds, "explains the mode of action of thyroid extract in the treatment of goiter."

Dr. T. M. Jones, in a recent article on "Hyperthyroidism," expresses the opinion that the treatment of simple goiter is, primarily, medical, saying:

"As a matter of fact, 50 percent of the cases of goiter will recover spontaneously or under proper hygienic, dietetic, and medicinal treatment; 25 percent will recover if to the dietetic, hygienic and medicinal treatment the injection of, for instance, carbolic acid be added, while the remaining 25 percent will resist every form of treatment except excision."

Surgical Treatment

Crile, writing (in 1907) on goiter, refers to 152 of his own cases, and regarding the practical surgical method of treating the thyroid gland makes the following statement: "The development of the surgery of the thyroid gland is best appreciated by the state-



Fig. 1. Showing how to induce local anesthesia for skin incision.

in one year, the administration of thyroid extract in doses of 10 to 15 grains a day, without any local treatment, caused the disappearance of the goiter. In one of these cases, the goiter has existed for three years, while the other 7 were but of six months' growth.

Chambers also says, among other things, that the form of goiter in question is very common among girls, and that their course is variable, the majority of these enlargements disappearing without medicinal treatment; that some, however, persist for several months, or even as long as one or two years, and some become permanent.

In explanation of the power of thyroid extract to cause certain types of goiter to

ment that the mortality from thyroidectomy in simple goiters, in nonmalignant and in the benign tumors, has fallen from 40 percent to a fraction of 1 percent. In my own series, the last 101 such operations have been done without a fatality."

J. R. Wathen, writing, in 1910, on the indications for operation, asserts that "it is only in those patients whose goiters remain for several years; whose general health fails, whose pulse runs from 100 to 140 or more, who have disturbances of digestion of long standing, whose eyes begin to show enlargement or are protruding, and whose nervous system shows in muscular tremors that we should advise an operation early enough to avoid the late destructive changes seen in neglected cases; cases where the family doctor has for years been administering iodine locally and internally, electricity, and so on, all of which have been proven to be of no specific value."

I quote the same author further:

"The only real therapeutic measures of any pronounced value, aside from the operative removal of the gland, seem to be, some good heart tonic, as tincture of strophanthus, and such physiological methods as hydrotherapy and the rest treatment in properly conducted sanitariums. Based upon a comparatively large experience, I should say that, if we delay operation for several years, administering iodine and electricity until the heart-muscle has undergone degeneration, there is albumin in the urine, enlargement and fatty degeneration of the liver, lowered blood pressure, and so on, we have waited too long to attempt radical operative measures, and these patients will generally die.

"The proper time to advise operation, with an expectancy of a low mortality and good results, is, after this thyroid enlargement has begun to manifest the early symptoms of exophthalmic goiter and has existed for several months or years, with little or no signs of improvement. Avoid the young girls developing into puberty, as these will usually recover without treatment.

"In the selection of our patients for operation, we should realize that early operation, before complications have arisen, as in appendicitis, gallstones, and so on, offers the best results. Those cases whose pulse is not over 120 or 130 and which under careful prepara-

tory treatment can be reduced to 100 or below, and whose arterial tension is not far from normal, will usually stand the operation well and give good results."

W. D. Hamilton, in an article in which the indications for goiter operations are discussed, quotes from the surgeon, James Berry, of London, the following significant statement:

"A parenchymatous goiter is one in which the whole thyroid gland is enlarged, all its vesicles being distended with colloid secretions. Small parenchymatous goiters not causing dyspnea should never be treated by operative methods.

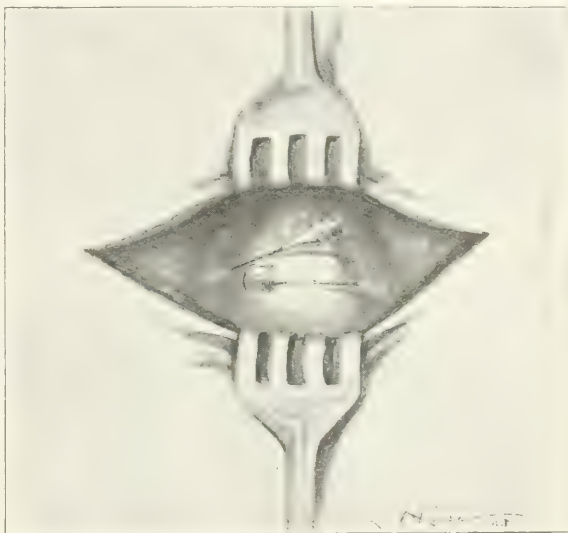


Fig. 2. Anesthetizing the deeper tissues.

"Very large, prominent parenchymatous goiters in young subjects are occasionally suitable for removal by extirpation, even when dyspnea is not dangerous or serious, provided that the patient is willing to run a certain amount of risk in order to get rid of an unsightly deformity.

"The lower down in the neck the goiter, the more serious are its pressure effects. The most dangerous of all goiters are those which are situated partly or wholly within the thorax.

"It should be borne in mind, also, that the soft trachea of a child or young adult is much more liable to sudden fatal compression than is the rigid and more resisting trachea of an elderly person. Certain rare cases of subacute inflammation, chronic supuration, and sinuses left after injection may demand extirpation."

Hamilton then refers to Professor Kocher, of Bern, and his work regarding goiters, and quotes from him as follows:

"Kocher, whose diagnostic and surgical experience has probably not been equaled or excelled, gives the following indications for the operative treatment of goiter: 'We long ago abandoned the belief that every goiter must first be treated with internal remedies and referred to the surgeon only if internal medication fails: (1) Internal treatment is useless in struma nodosa, with nodules in process of secondary degeneration. Degenerative nodules can also be recognized directly by the changes in their consistency. Thus, all colloidal degenerated nodules (struma gelatinosa), as well as fibrous, calcareous, hemorrhagic, and cystic nodular goiters, must at once be turned over for operative treatment. (2) Diffuse colloidal tumors that have resisted several brief periods of iodine medication must be referred to the surgeon, especially if they have already given rise to functional disturbances. (3) All goiters that cause pronounced pressure symptoms must be treated by operation. (4) The same is true of those which produce cardiac symptoms and (5) of goiters that are abnormally situated, especially struma profunda and intrathoracic, which are very dangerous if the tumor continues to grow. (6) If a goiter develops suddenly and grows very rapidly and if the shape and consistency are unusual, it must be treated by operation, regardless of age. (7) A goiter showing sensitiveness on pressure, especially if it causes spontaneous pain, must be referred to the surgeon.'

"Further, under the head of surgical treatment of Graves's disease, Kocher epitomizes the matter in the following words: 'To say that this is still the best, is not enough. It has proved itself superior to any other form of treatment. It attacks the organ which is instrumental in producing the toxicosis, namely, the thyroid gland.'"

E. H. Schneider, in a recent article on the indications and contraindications for operation in cases of exophthalmic goiter, says that the surgical mortality is 1-2 to 5 percent, depending entirely upon the experience of the operator; while the mortality under medical regimen is from 10 to 25 percent, within five years. He therefore adds that every case of mild or moderate degree, in which the symptoms have continued for several weeks with the same or increased intensity, in spite of rest in bed and medical treatment, should be placed in the hands of

a surgeon. Severe and remittent forms are also for the surgeon, he asserts.

Schneider then names the following as the important contraindications to operation: marked mental irritability (usually the earliest symptom, and including restlessness and insomnia); rapid loss of weight; great muscular weakness (the two latter indicating a profound toxemia); dilatation of the heart exceeding one inch; diarrhea, vomiting, and edema. He adds: "Edema and anasarca are usually secondary to cardiac insufficiency and require medical treatment until the heart has regained its compensation."

J. H. Jacobson, in a recent article, says that Basedow's disease can be cured in about 70 percent of all cases by the surgical removal of portions of the thyroid gland, adding that the improvement sometimes is proportional to the amount of thyroid tissue removed. He also, in common with the majority of observers, recommends the early operation for the two following reasons: (1) the operative mortality in advanced cases of exophthalmic goiter is very high, whereas in the beginning of the disease it is very low; (2) although a successful operation may be performed in advanced cases, the heart changes are but rarely relieved.

Among the various methods of operation that have been employed, such as ligation of the thyroid arteries, pole ligation, resection of the cervical sympathetic ganglia, resection of one lobe—either alone or in combination with a hemisection or ligation of the opposite lobe—the resection operations, experience seems to show, give the best results, according to Jacobson.

Although thousands of operations have been performed for the cure of exophthalmic goiter, Jacobson quotes the statement of another writer, to the effect that it is not yet known how much of the thyroid gland should be removed in any given case; as follows: "Some of the severest cases have been sufficiently cured by the removal of one lobe, and in some of the mildest the excision, almost total, of both lobes has been necessary to bring about a cure or a satisfactory condition." As a matter of fact, this question must be left to the judgment and experience of the operator.

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The Doctor's Horse

By NELSON S. MAYO, D. V. S., Chicago, Illinois

III.

IT IS taken for granted that the doctor has a satisfactory horse; if he has not, the sooner he gets one the better. A satisfactory horse is a source of real pleasure to the owner, not only while it is living, but long after the horse has traveled the trail to horse heaven, since the remembrance of his good qualities will still come to cheer a lover of good animals.

A source of satisfaction to the owner of a good horse is to have a comfortable home in which to care for it. The accompanying illustration and plan show the most conveniently arranged barn for one or two horses and a cow that the writer has ever seen.

The appearance of the barn is excellent and it is of inexpensive construction.

Good care not only lengthens the horse's life, but it increases its efficiency, and this is of unusual importance to a doctor, since his work is irregular and frequently as severe for his horse-flesh as it is for himself.

Some Good Rules for Dobbin's Care

All harness and equipment should be of good quality and frequently examined for indications of weakness. It is dangerous to wait for an important part of the harness to break, since this accident may happen in the most inconvenient of seasons.

In severe or changeable weather, a large square woolen blanket should be carried to cover the horse while standing. Large safety blanket-pins should be attached to fasten the blanket to the harness or shafts in order to prevent its being blown off.

A good leather neck strap, that also fastens to the bit; should be carried for tying the

hay, if bright and clean, can be used, but it should be fed sparingly. Dusty, spoiled hay should never be fed to horses.

For a grain ration, oats should form the basis. Corn and wheat bran can be combined with oats to advantage. A good mixture is: ten pounds oats, two pounds corn and one-half pound bran. The general "rule of thumb" is a pound of grain and a pound of good hay per day for each 100 pounds live weight of the horse. Of course, the amount must be varied to suit individual cases and conditions. If the horse is working hard the quantity should be increased, and if not working it should always be reduced.

Keep the Horse "in Condition"

An ounce or two of common salt should be given the horse weekly, or brick salt may be kept before him constantly. Stock molasses added to the grain ration, and gradually increased

until its laxative action is noted, is excellent to remove intestinal worms and make the coat smooth and mellow. As a "conditioner" for horses, when combined with good food, it is superior to "condition powders," and much more economical.

The stomach of a horse is relatively small and the bowels capacious, and it is important that the horse be fed and watered frequently, and only moderate amounts allowed. It is a frequent but mistaken kindness to give a horse an extra big feed, either before or immediately after a long hard trip. A horse cannot do his best work on a full stomach

horse, and in tying a horse remember the horseman's golden rule, and "tie short." The floor of the horse stalls should be of wood or some sanitary composition material. Cement is too hard and slippery for this purpose.

The horse should be well bedded at night. While horses rest a great deal standing and may go for months without lying down, yet they rest better when they do lie down, and plenty of bedding keeps them clean and comfortable.

The horse's feet should be carefully looked after and, if he has to travel much on pavements or macadam roads, rubber pads under the front shoes will greatly modify the concussion and lessen the danger of injury.

Feeding and Watering

There is probably no one thing that contributes more to the efficiency of a driving horse than proper care in feeding and watering. The food should, of course, be of good quality. Bright, clean timothy or prairie hay is excellent. Mixed hay, containing a small amount of clover, is also good. Clover or alfalfa



Fig. 1. A model barn for a doctor.

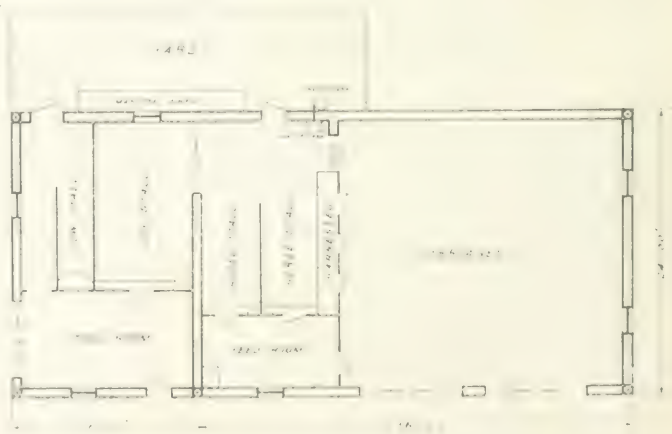


Fig. 2. Plan of the model barn.

and he should never be given a full amount of food or water when he is warm and tired. The horse should be allowed only a small amount of water first, and if very warm he should be covered with a light blanket and walked about until he has "cooled off." A little hay can then be given and then the horse given a good "rub down" with wisps of straw or rubbing-cloths, since this simple expedient rests the horse very much. Then give the horse a reasonable quantity of water and follow with the usual ration (or less) of grain and hay. Where it is necessary to make a change in the horse's ration, it should be done gradually.

Caring for the Horse's Coat

Frequent and thorough grooming adds much to the appearance of a horse. A light stable blanket keeps the coat clean and smooth.

If a horse has a heavy coat of hair, it is a good plan to have him clipped after the severe winter weather is over. A clipped horse should be protected against unusual exposure. Most driving horses have comparatively little hair on the legs below the knees and hocks, but if there is much, the legs should be clipped below these points during the winter and spring to prevent "mud fever," irritation of the skin due to accumulation of mud or dirt.

Where horses are used on pavements it is desirable that the shoes be removed and that they should have a run at pasture if possible for a few weeks every summer.

Another point to be remembered by the physician when putting his horse in strange stables is to inquire as to the presence of equine influenza or any other transmissible disease. While the doctor must expose himself to various infectious diseases, he should protect his faithful horse as best he can.

The doctor who has ridden or driven a good horse for a few years forms an attachment for his horse that is one of the real pleasures of life. This sentiment is well expressed by Brininstool in "The Ol' Cow Hawss":

"When my soul seeks peace an' quiet on the Home
Ranch of the Blest,
Where no storms or stampedes bother, an' the trails
are trails o' rest,
When my brand has been inspected an' pronounced
to be O. K.,
An' the Boss has looked me over an' has told me
I kin stay,
Oh, I'm hopin' when I'm lopin' off across that
blessed range,
That I won't be in a saddle on a critter new an'
strange;
But I'm prayin' every minnit that, up there, I'll
ride across
That big Heaven Range of Glory on an Ol'
Cow
Hawss."

Why So Many Doctors Fail

By CHARLES B. GIFFORD, Muskogee, Oklahoma

Secretary of the American Veterinary Medical Association

WHY so many doctors, when taking up the study and practice of medicine, fail to reach the goal they set out to attain, is a subject that is causing many a backward reflection, not alone on the part of those members of the profession who have not met with the advancement and success they anticipated at the beginning, but also by the general public, among whom it is causing a feeling of unrest and lack of confidence toward the general practitioners; and it would be well for the latter to consider more seriously and ponder that sentiment, for their own future benefit and protection, as undoubtedly the doctors themselves are responsible for much, if not the greater part, of the cause of that unrest and broken confidence.

Being a mere layman, the man who holds down the cushioned editorial sanctum of the

medical journal, as well as the practitioners, may think I am not qualified to write or speak on the subject; but, in this, as is true for the selection of a jury in a court of competent jurisdiction, I ask that prejudgment be withheld until after hearing the evidence and considering the merits of the argument.

It is not that I claim anything unusual in the way of educational ability, advantage or exactions, but my conclusions are based upon my own experiences as well as my observations and investigations of conditions that have presented themselves to me during many years, as a paying patient, and also in soliciting among doctors and doing business with them in a special line, which gave me the best of opportunities to get facts and figures. And during these years I have made it a special aim to get all the data and facts I could upon the subjects, both from practitioners,

medical journals, and other sources—with a certain object in view—and I venture the statement that but very few intelligent members of the profession will disagree with my statements and suggestions.

The young man, after years of ambitious study to become a man of medicine, after getting his medical diploma, looks around for a location to practice, finally selects what he considers a promising one (and ten chances to one it is a place where there already are too many practitioners), and, obtaining his license to practice, secures an office and—waits for customers. The older doctors already established there, and who look upon the already crowded field as their own, naturally do not look upon the newcomer with favor; some contemplate him with suspicion, others with scorn, the “mailed fist” being much in silent evidence. Still, they are all bound, or supposed to be, by the same code of professional ethics which they would have the layman believe includes the “open hand of fellowship and good will.” Nevertheless, material difference in precept and in practice is evidenced in many instances; a fact observed particularly in the dissensions, strifes, and animosities among the members of the local medical societies when run and dominated by a self-selected clique—as most of them are. It is not wise for the doctor to think that not at least some of the public know of these things. The public does know, and is becoming more interested all the time, as shown by its turning to drugless treatment, Osteopathy, Chiropractic, Christian Science, and other claimed sources of relief.

The Young Doctor's Troubles

To get a start, and being keen for business, yet, possibly, handicapped by limited capital, as most beginners are, the young or new doctor accepts every patient that comes his way, booking the larger part, if not practically all, of his charges for services, taking promises for cash and trusting to Providence. The patrons he usually gets are those who owe the other doctors, the slowpay, promise-to-pay, nopay, all the derelict elements of the community. These derelicts of course are glad to see the new doctor come, having worked the others to a standstill with their promises; so when sickness or accident comes, they hook on to the new doctor and proceed to “work” him in the same old way.

Because of his lack of experience and business training (and this has not been a part of medical-school training—to the sorrow of the profession in general), the new man is not

prepared to handle the business end of his profession as it should be. As the weeks and months pass and the amount of his book charges mounts up, he thinks he is doing a big business, getting along fine. He does not realize that some day there must be an accounting, an inventory taken, when his bank-account, if he happens to have one, has struck a balance, his cash is gone, while his credit in the community is slipping away.

During this period of watching and waiting and the accumulation of worthless book-charges, this doctor's expenses are going on, growing larger all the time; a fact which must eventually be met, yet to which he carelessly and fatuously gives but little thought. If he is married, with a growing family, there are to be considered the expenses of the home, with the unavoidable items for rent, fuel, light, groceries, meats, clothing, and so on. He gets behind in the payment of his bills, while collections are bad, not enough cash coming in to meet expenses; collectors are running after him, credit has become shaky, so that finally his troubles and worries bring him to the verge of distraction.

What is the poor fellow to do? Up to this time, he has followed the straight line of honest, legitimate practice, to the best of his understanding of the code of ethics and the dictates of his conscience. Then the opportunity is offered him to break faith with his conscience and the precepts of the code—a chance to get the much needed money with which to pay his bills by doing something. Doing what? To perform an illegal operation, one that pays big money, usually. And he takes the gambler's chance. This, dear reader, is a truthful portrayal of the pathway to ruin in thousands of cases, that need no other finishing touches.

It's a Matter of Cash

Thus, the failure or the success of the doctor, analyzed, is a matter of cash, *cold hard cash!* The larger percentage of doctors, after they have rendered the service and booked the charge and have waited and waited for the final fulfilment of fulsome promises given in lieu of payment, are afraid to demand what is due them, for fear of offending these patrons; procrastinatingly they hang on to the account, allowing it to grow older and older, while they themselves are on the verge of financial and professional ruin.

Fear of offending the delinquent patron—what a delusion! This is the devastating influence that eventually leads to illegitimate practice, leads to the downfall of the doctor

in his legitimate practice and to the loss of respect of his community, with the career often ending in the criminal courts.

Fear of offending his patron—what a delusion! By neglecting to collect his bills with reasonable promptness, keeping after the delinquents persistently until he gets his pay, the doctor not only loses a large amount of money due him, but, worse, he loses the respect and confidence of these same patrons whom he fears (who, indeed, may include the derelict ones), as well as that of the community in general—for it has its eyes on him.

Just carry the ordinary debtor along for a few months, or, as many of the doctors do, for years (during which time in all probability they are patronizing the other doctors) without the doctor's making a special and persistent effort to get his money, the debtor is sure to become the secret enemy of the doctor and will work against him among his friends and acquaintances, keeping them away from this doctor as long as they themselves are owing him. This is but the derelict human nature, and is indulged in with doctors more than in any other occupation, for the reason that it is known (and admitted), with but few exceptions, that doctors are poor business men, careless and reckless in matters of business, and easy to "work." This not only is true in the matter of their professional work, but in many other ways.

A Good Collector Makes a Good Doctor

The doctor who looks closely and carefully after his collections, as he should, persistently following the people up until he gets his pay, not only is enabled to pay his own accounts promptly, thereby retaining the good will and respect of his creditors as well as of the collectors (a most valuable asset!), but he can keep up a good appearance, provide himself with the best medical textbooks and medical journals, and from time to time increase his professional equipment, so as to keep abreast with the progress of medicine; all of which attracts the eye of observant people and inures to his benefit.

On the other hand, the doctor who does not do this, who, because of his stupid delusion, his ungrounded fear, neglects this important matter (and too many are guilty) cannot make a success of his work, becomes slovenly, grouchy, incapable, and this also is noticed by his patrons and the general public, to his serious detriment, even more than the members of the profession are willing to believe; even though aware that something is radically wrong somewhere.

Only recently I was visiting a doctor acquaintance in his office, and discussed this same topic—the business end of the doctor's practice. During my visit, possibly three-quarters of an hour, three local collectors called upon the doctor with bills, and each one was obliged to leave without collecting a cent—the doctor was financially broke, as he told me. During our talk, I listened to what to me otherwise might have been a pitiful tale of woe and hard times. Pitiful otherwise—why "otherwise"?

This doctor had told me he had outstanding considerably more than \$10,000, some of the accounts considered as good as gold, some considered good but slow, others probably bad, yet still others looked upon as absolutely worthless and not worth while to bother about. According to this doctor's confession, many of these accounts, the most of them, in fact, remained uncollected because of his *delusion*, his *fear*. This doctor (as most of them) had made but little effort to get his pay, accepting promise after promise, which were not redeemed, and he was procrastinatingly "hanging on to his books" for fear that they would get away from him, while many of the debtors, money and all (as the owl in its flight), had gone to other parts, leaving no trace of their whereabouts.

As I talked to this doctor, he expressed himself willing to do almost anything to get the much-needed money to pull him through. He was laboring under a nervous strain such as caused me to ponder the question whether he would be a safe man in this condition to call in a case of serious sickness, or even in a minor one, and the echo came, "Would he?" I do not hesitate to say that I should not want a doctor who, as I knew or had cause to believe, was laboring under a mental strain of this nature, to be called in to take care of me or of anyone in whom I was interested.

Open Your Eyes—Wake Up!

It seriously behooves the medical practitioner to open his eyes and ears and to use his brains to reason, that he may know that he is constantly being watched, and very closely, by eyes that are more observing and critical as they are being opened to enlightenment, and being judged by minds more exacting, and that this critical attitude is causing a greater loss of confidence on the part of the lay public.

As undoubtedly it is a question of cash, the doctors should wake up to see the errors of their ways, to release themselves from the bondage of an apparent bankrupting code of

ethics, to the extent of giving closer attention to their collections, the one near chance to save themselves from financial and professional ruin, and to keep them out of the field of medical quackery, if not the criminal courts. If they have not the inclination, time, or facilities to look after their collections themselves, they should secure the services of an outside agency; and, as to this, I would suggest resort to a reliable collection agency (there are such). A reliable agency—and it matters little where it is located—undoubtedly is best equipped for rendering the most satisfactory service possible, as it has experienced help, facilities—and has no other iron in the fire.

Another feature that I wish to bring out, one that seems of interest particularly to the subscribers of medical journals, is, the absence in probably all of a department devoted to business—the business end of the practice of medicine. There is no subject of greater importance to the doctor than the question of information on the best ways and means of handling his collections so as to get the most money out of them; yet, it is a subject that is neglected and slighted on the part of editors

and publishers, although the matter is really one of vital interest.

These men know the great need for more information on this important subject, of material interest to the medical profession, still, they do not seek it, and more often decline it when offered for publication, turning the papers down as not being adapted to "their ideas" or "not in their line"; which causes me to believe that many (not all of them) of these journals are published, not at all in the interest of the profession, but solely for the financial gain and benefit of the publishers themselves. Do not understand me that I look upon all medical journals in this light—I do not. There are a number of good ones, with a heart and a soul and with an interest in their subscribers' welfare, as proven by their efforts to publish with each issue a journal of greater benefit and value.

Doctors can correct many of these detracting conditions, if they will, and medical journals should join in rendering such known needed assistance as they can in their behalf, which at the same time would be to the future benefit and advantage of the publishers themselves.

SOME say that the age of chivalry is past. The age of chivalry is never past so long as there is a wrong left undressed on earth and a man or woman left to say, "I will redress that wrong, or I will spend my life in the attempt." The age of chivalry is never past so long as we have faith enough to say, "God will help me to redress that wrong, or if not me, those that come after me."

—Charles Kingsley.

What Others are Doing

RULES FOR CONSTRUCTING FLAT-FOOT SUPPORTS

According to official reports for 1909-10, more than 1000 men of the Prussian army entered the hospital, disabled by flat foot, with a total exceeding 13,000 of days of treatment. Flat foot, hence, must be considered a serious problem in national economics. To meet this, Military Surgeon Baumbach has studied this question, and (*Deut. Mil.-Aerzt. Zeit.*; cf. *Militaerarzt*, 1915, No. 1) submits a set of rules to which foot-supports should conform.

The foot-support, preferably, is made of steel plate, and so constructed that it is not to be fastened to the shoe. It must (1) raise up the tilted calcaneus on the principle of the inclined plane. (2) It must encompass the entire section of the foot from the heel to the balls of the toes. (3) It must be curved upward on the outer edge, and must support the hollow of the foot only to the extent to which this portion of the foot can naturally be raised. (4) In order to meet these requirements, an individual plaster cast must be taken of each foot, from which to fashion the plate.

CAUSE OF THE PULSUS ALTERNANS

The unproven theory that the pulsus alternans, or alternating rhythm of the heart beat, depends upon a disturbance of the cardiac contractility is rejected by K. Amerling (*Sbor. Lekar.*; cf. *Wien. Med. Woch.*, 1915, p. 46), who believed he has discovered the real cause to lie in a superhydration, or hydrous infiltration, of the heart-tissue.

Amerling bases this opinion upon the fact that he has observed this anomalous pulse to occur in nephritis associated with generalized edema. Furthermore, he has produced this condition experimentally by immersing isolated frog-hearts in distilled (nonphysiologic!) water, either completely or partly so, as also by circulating through the heart, *in situ*, hydremic blood. In the latter experiment, the frog swells up (that is, when water is allowed to drop upon the exposed

intestine), and then sometimes the heart will assume the alternating rhythm.

ALBUMIN- AND FAT-FREE DIET IN CARDIAC INSUFFICIENCY

Han Januscheke, of Vienna (*Wien. Med. Woch.* 1915, No. 1) reports three cases of cardiac insufficiency in which a surprising and rapid restoration of compensation was accomplished under the following regimen:

The ordinary meatless diet consisted of 100 to 140 Grams dextrose dissolved in tea or lemonade, either alone or with three light biscuits ("semmel") a few cakes (German!), garden vegetables (no legumes!), soup, and fruit. Intercalated, there were days when the diet was devoid of or poor in albumin and fat. In addition, digitalis-therapy went hand in hand. The refractory heart soon began to respond to the medicament. This course of diet may bring success where the Karell milk-cure has failed.

TETANUS CURED WITH MAGNESIUM SULPHATE HYPODERMICALLY

The following case of tetanus has been reported (*Wien. Med. Woch.*, 1914, p. 2520) by Herman Schlesinger. The patient had been seriously wounded, in battle, by shrapnel, one piece perforating the stomach, another penetrating the abdomen, and intense traumatic tetanus followed in the train.

A magnesium-sulphate therapy was decided upon; however, because of the danger (arrest of respiration) attending the customary intraspinal administration of this agent, the hypodermic method was adopted. The solution employed was of 25-percent strength, and of this at first 20 Grams was injected twice daily, which later was reduced to once a day.

Immediately the clonic attacks came on less often, the pain diminished, and sleep became possible. Where there was not an instantaneous cure, the impression gained was, that the symptoms were beneficially influenced in a marked degree. After an intervening attack of dysentery, the patient

eventually was completely cured, and healed of his ghastly wounds.

"PUNCH," AND TYPHOID INOCULATION

We learn from *The Canadian Practitioner and Review* that the British comic weekly *Punch* has been doing valiant service for scientific medicine in England, through its support of typhoid prophylactic vaccination. An episode which is particularly interesting to us is related by our Canadian contemporary, as follows:

"The antiinoculation members have recently done much advertising. The public generally were amazed to see one of their full-page advertisements in *Punch* of January 13. As a consequence, the explanation in the next issue (January 20) was received with great satisfaction. The following is the statement: 'The advertisement which appeared in our last week's issue, opposing the principle of the inoculation of soldiers against typhoid fever, came in very late, and unfortunately its contents were not submitted to the Secretary. "Mr. Punch" is most absolutely in favor of inoculation against typhoid fever for the troops.'"

INJECTION-TREATMENT OF HEMORRHOIDS

Here is a combination, recommended by C. A. Freeman in *Ellingwood's Therapeutist* for November, 1914 (p. 414), for the injection-treatment of hemorrhoids. This formula has been used by him for more than twenty years and has given very satisfactory results. It is as follows:

Carbolic-acid crystals.....	drs. 7
Glycerin.....	dr. 1
Cocaine hydrochloride.....	grs. 20

With the syringe partially filled with this solution, the needle is inserted into and almost through the tumor; then the liquid is injected drop by drop as the syringe is being withdrawn, meanwhile the effect being watched. After it is half withdrawn, the needle, if necessary, may be passed to one side or the other, so as to destroy the entire growth with a single injection. Only a few drops of this solution are needed for a single pile tumor. There is almost no pain, and the patient rarely needs any after-care.

THE TREATMENT OF SEPTIC WOUNDS

Military surgeons who are treating wounds in France and Flanders are unanimous in

their testimony that these wounds are followed by a larger percentage of septic complications than those received in any of the recent wars. This is owing to the fact that this contest is very largely a continuous battle of the trenches, the men being plastered with mud and living constantly under insanitary conditions, without opportunities for personal cleanliness.

In the *Paris Medical* for February 13 (p. 365), Mencière, who had had five months of experience with operative work in the hospitals, both at the front and in the rear, tells something about his experiences with septic wounds. He has found that the aseptic methods in vogue in surgical practice for a number of years could not be depended upon under the present conditions. He has found it necessary to resort to antiseptics more than at any time before; and not one of these, simply, but several.

In bad wounds, when there is sepsis or fragmentation of the bone, he recommends removal of the bony particles that may wound the blood-vessels, then, in order, cleaning of the wound, multiple incisions so as to secure proper drainage, and then successive washings with three different antiseptics, namely, corrosive sublimate, 1:1000, phenol solution, 25:1000, and hydrogen-dioxide solution, 33 percent. These three antiseptics are used, because each has its own special indications. An infective organism which will resist one parasiticide will yield to another, and in these field-wounds many harmful microbes abound.

The permanent dressing applied by Mencière consists of a gauze drain or wick dipped into the following mixture:

Iodoform.....	Gm. 10
Guaiaicol.....	Gm. 10
Eucalyptol.....	Gm. 10
Balsam of Peru.....	Gm. 30
Ether.....	Gm. 100

These applications favorably influence the most septic wounds, and often yield un hoped-for results. Suppuration and the bloody discharge cease, leaving behind a healthy, carmine-red appearance of the tissues, and healthy granulations appear. Cicatrization frequently is exceedingly rapid. For three or four days, the wound is washed daily with the three antiseptics mentioned; then, as the condition improves, the washing is restricted to a 33-percent hydrogen-dioxide solution.

The drainage with the wicks dipped in the iodoform-guaiaicol-eucalyptol solution is continued, the wound being dressed with this preparation each day. It is essential that

the wound be left open and that the drainage is perfect. Glass drains are recommended, when obtainable.

Mencière declares that his wound-balsam is powerful as an antiseptic, deadly both to the microbes and their spores, while harmless to the cells, stimulant to the phagocytes, and stimulating repair of the wound. He has succeeded with this method of treatment after having tried all other antiseptics, including formalin, salicylic acid, tincture of iodine, and even iodine vapor.

HYALINE CASTS IN THE URINE

In a letter to *The Lancet* (Jan. 2, p. 45), Sir James F. Goodhart declares that hyaline casts are found so often in the sediment of centrifugalized urine, when there are no other evidences of renal disease, that many times they may be passed over as of no significance. Sir James doubts whether many of these casts come from the kidneys at all and believes that, if there is no other indication of renal disturbance, they may be ignored. Surely, he says, they cannot all be washed-out blood casts, and he raises the question whether many of them may not be mucinous and added to the urine in transit from the kidneys to the bladder.

GLYCERIN IN BROMIDROSIS

The offensive smell of sweating feet, T. H. C. Benians writes in *The Lancet* for December 5, 1914 (p. 1301), results from a number of substances, the most important being certain aromatic bodies, probably indol and perhaps skatol, in conjunction with fatty acids. Another, and possibly the most harmful, body present is ammonia, which has a solvent and destructive action upon the keratin of the skin, and probably it is this which gives rise to the blisters and abrasions occurring in patients suffering from sweaty, ill-smelling feet.

Benians asserts that glycerin and certain carbohydrates applied to the feet will prevent the formation of ammonia by the indol-producing bacteria. Also, the incidental fermentation of the glycerin produces a marked acidity, thereby correcting the local harmful alkalinity and preventing the formation of indol and other end-products of protein destruction.

In practice, Benians has found that applications of glycerin keep the skin of the feet in a healthy condition. The treatment pre-

sents no difficulty, involving only the occasional application of small quantities of this substance. Glycerin keeps the skin moist, although this does not mean that the horny protective covering has been softened. On the contrary, while retaining its protective qualities, the skin is merely rendered supple, and, hence, will wear better than a hard and brittle epidermal integument of the feet.

Several cases are reported in which the method was tried and found effective, merely a little glycerin having been rubbed over the soles and toes before the socks were put on in the morning.

INDICATIONS FOR SERUM-THERAPY IN TETANUS

Tetanus-antitoxin is best administered. E. v. Behring, of Marburg, writes (*Deut. Med. Zeit.*, 1914, p. 1833), by injecting it into trunk nerves leading centripetally from the wound, after, if need be, laying them open with the knife. The local treatment consists in applying coarse crystalline iodoform and irrigating the wound with a 1-10- to 1-2-percent solution of iodine-trichloride solution. The antitoxin disappearing rapidly, it must be repeated at appropriate intervals. The author mentions the immune-serum of the Behring works as of exceptionally low anaphylactic toxicity.

Commenting upon the foregoing article, R. Koch, of Frankfurt, expresses the hope that the serum-treatment of tetanus, at present greatly discredited, will again be taken up by the profession; and he declares that three facts are definitely established, namely: (1) The neutralizing action of the antiserum upon the tetanus-toxin has been firmly proven by experiment. (2) Nevertheless, most of the victims specifically treated succumb. (3) Here and there tetanized individuals recover without receiving antitoxin.

These facts do not justify us, though, to condemn antitoxin as worthless in practice. Rather, we should recognize in tetanus a disease not unamenable to treatment, and, profiting by our experiences with other sera, try larger and more frequently repeated dosage and adapt the manner of administration of the antitoxin to the exigencies of the point of entrance of the virus. Von Behring also expresses the hope that the production of antitetanus serum—now furnished on too small a scale—quickly may be enormously increased, and thus, in the present war,

insure the saving of a multitude of lives that need not, and should not, be sacrificed.

INTRALUMBAR INJECTIONS IN NEURAL SYPHILIS

H. Campbell details (*Brit. Med. Jour.*, 1914, p. 577) the successful treatment in 10 cases of syphilitic and parasyphilitic disease of the nervous system by means of intralumbar injections according to the Swift-Ellis method. In the author's opinion, this at present is the only treatment promising arrest of the degenerative process.

PAPAVERINE IN PERTUSSIS

At a meeting of the Society for Medicine and Pediatrics of Vienna, C. Hochsinger, of the staff of municipal hospital for children, spoke of the value of papaverine in mitigating whooping-cough, as observed in the case of 21 children thus treated in his institute, two of whom he presented before the audience; thus corroborating the claims made for this alkaloid by Popper. The results in all the patients virtually were the same.

Always, the speaker averred (*Wien. Med. Woch.*, 1915, p. 94), the action of the papaverine hydrochloride became noticeable immediately: vomiting generally ceased instantly, the seizures of coughing were reduced in frequency, the attacks consecutively shorter and less severe. Complications never occurred. The cough, as a rule, persisted, of course, inasmuch as the disease itself was not cured; nevertheless, the speaker believed he had seen a cutting-short of the paroxysmal stage by the papaverine. It was admitted, though, that the epidemic may have chanced to be a mild one; but only future experience with epidemics can solve that point.

In the nature of the work, the physician had to depend upon the tales of the mothers; still, their effusive praises of the medicine given them for their children, after having found all previous treatment worthless, or nearly so, would seem to establish the effectiveness of the papaverine.

The mode of action Doctor Hochsinger conceived to consist in a relaxation of the various muscles involved; an influence which, indeed, might serve to throw new light upon the nature of pertussis. According to Pal, he pointed out, papaverine reduces the tonicity of the smooth musculature. Moreover, that

author asserts it to be almost nonpoisonous, a fact highly important in treating infants, since the narcotics in really effective dosage are fraught with too great danger at their age; but this alkaloid does not behave as a narcotic.

Taken all in all, the speaker thought that in papaverine we possess a positive, reliable remedy for whooping-cough, in spite of its being purely symptomatic; that it represents a marked advance in the treatment of this refractory malady, and that by all means it should be given a fair trial in the paroxysmal stage.

One case was instanced, as covering all the rest. The patient was a 4-year-old girl, who had been coughing for two weeks, and the last three days the attacks had taken on the character of typical whooping-cough. The attacks were occurring from 15 to 20 times in the daytime, and 10 or 12 times during the night, at which the staccato coughing-fits succeeded each other three or four times. Hence, the case was a severe one; the more so, since always the child vomited masses of glary mucus, sometimes food, too.

A prescription was written for a 0.03 : 100 solution of papaverine hydrochloride (grs. 5 in ozs. 3 1-2), a teaspoonful to be administered every two hours. Two days later, the coughing-fits were considerably diminished, only two having occurred in the day and three at night. There no longer was vomiting, the inspiratory fits ceased, the cough became very light, and the spells occurred only rarely, while the child slept comparatively undisturbed. Four weeks after instituting this course, the child was dismissed as cured.

In the discussion by the members, A. Goldreich, collaborator with the speaker, corroborated the latter's statements; besides, in his private practice, he had gained the definite impression that, papaverine, in appropriate dosage, stopped the vomiting and materially abbreviated the paroxysmal stage.

E. Popper, also of the hospital staff, stated that, in another department, the same treatment had been employed in a large number of cases, with similar success. Only, one must not be too guarded in the dosage, and the remedy, if practicable, should be given at 1-hour intervals. Slight somnolence, at most, may be observed, in infants, otherwise never any cerebral phenomena. All symptoms are diminished or allayed, but whether permanently cured remains a question, as also whether the drug should be given from the start; they now give it only when the disease is at its highest.

Dr. K. Hochsinger (not the lecturer) expressed himself to the effect that he has found papaverine to excel all other remedies in whooping-cough, particularly in decidedly ameliorating the intensity and duration of the paroxysms. However, he disagreed with Pal regarding the alleged absence of narcotic properties with respect to children; for they become markedly somnolent under doses of 5 cg. repeated at 2-hour intervals. But, he said, it is children affected in this manner who are most benefited by this alkaloid.

INFLUENCE OF IODINE ON THE CIRCULATION

A. Lehnforff, of the Clinic at Prague, has been conducting experiments upon the influence of iodine on the circulation (*Arch. f. Exp. Path. u. Pharm.*; cf. *Ther. d. Gegenw.*, 1914, p. 588). Using cats, he administered sodium iodide intravenously, and he observed increased blood pressure and a decided augmentation of the volume of the heart beat. The author considers this fact to furnish an explanation of the beneficial action of the iodides, even though these are taken by mouth, in that the drug insures a more thorough insanguination of the organs. This deduction, though, is considered by other writers as rather hazardous.

PROCEDURE IN VENEREAL ULCER

Often a clinically absolutely typical soft ulcerous lesion may really be a true primary luetic affection, even when the test for spirochetes results negatively. For this reason, H. Mueller, of Mainz (*Muench. Med. Woch.*, 1914, p. 1285), following A. Neisser, insists that at all events several salvarsan injections should be given, so as not to miss the opportune moment for prophylaxis.

FUNCTION AND THERAPEUTIC USES OF CORPUS LUTEUM

L. Leitz, H. Wintz, and L. Fingerhut, in collaboration, have succeeded in isolating from the corpus luteum of cows two specific bodies playing opposing physiologic roles; the results of their labors being published in the *Muenchener Medizinische Wochenschrift* (1914, p. 1657 and 1734).

One of these bodies is a lipid, which the authors term "luteolipoid." This principle is a limited antihemorrhagic, as shown by

animal-experiment as also, hypodermically administered, in the case of not less than 200 women. This property is peculiarly limited, in that it checks bleeding only in menorrhagias when there exists no organic alteration of the genital organs; consequently not in hemorrhages of pregnancy, inflammatory diseases of the adnexa or the like. In dysmenorrhea, it simultaneously allays the pain.

The other principle, which has been called "lipamin," is a lecithalbumin. In contrast to luteolipoid, this substance promotes uterine bleeding. In experimental animals, it hastens development of the genitalia. In the case of women, if administered sufficiently long, this lipamin is capable of establishing menstruation when amenorrhea exists. Thus, normal menstruating depends upon the corpus luteum's providing lipamin and luteolipoid in correct balance and amounts.

INTERNAL TREATMENT OF WOUND INFECTION AND SEPSIS

Concerning the subject named in the title, H. v. Hoesslin, of Landau, writes essentially as follows in the *Muenchener Medizinische Wochenschrift* of September 29 last:

"These lines are intended to recall to mind a remedy which, owing to the innumerable new synthetics flooding the market, has been completely forgotten by most clinicians, a drug that has been proven to influence beneficially, particularly in the initial stages, wound infections, lymphangitides, and phlegmonous inflammations, tending to insure rapid recession of swelling, redness, purulency, and fever-temperature. I refer to mercury in minute dosage, best in the form of a readily soluble salt (Hg Cl_2 —with KI, to modify its disagreeable metallic taste).

"Give of the mercury bichloride 0.015 to 0.02 Gram (gr. 1-4 to gr. 1-3) in a day, and continue for two, three, four days in succession; diminishing as the inflammation goes down, until the dosage of 0.0075 Gram (gr. 1-8) per day is reached, at which point the mercurial may be continued for (a little) longer. [The text has it "Gm. 0.075," but this must be a misprint.—ED.] Should the fever be considerable, the dosage may, for a short period, be increased to as much as 0.025 (gr. 2-5) or even to 0.03 (gr. 1-2) Gram per twenty-four hours. Between the separate doses, the patient is given a little nourishment—milk, for instance.

"The following prescription may serve as a guide for dosing the medicine:

Mercury bichloride Gm. 0.04 (gr. 3-5)
 Potassium iodide Gm. 0.04 (gr. 3-5)
 Syrup (favorite flavor) . . . Cc. 20.00 (drs. 5)
 Water, enough to make . . . Cc. 200.00 (ozs. 7)
 Label: A tablespoonful every 2 (or 3) hours.
 Note: This mixture is to be repeated once!

[The favorite corrective among German physicians is orange-peel syrup; here, however, the more pronounced syrup of sarsaparilla, or that of wintergreen or red raspberry is preferred. However, no reason is apparent why this nasty chemical should not be dispensed in the form of small-dose pills. As to the single dose, the author seems to reckon upon a division into 4 or 6 in the day.—Ed.]

"These small doses, lying far below the maximal, are recognized as being of value in cardiac dropsy. Besides, this treatment has given excellent results in the various infective diseases, such as typhoid fever, pneumonia, and diphtheria, being especially in vogue for the latter before the antitoxin-era."

PYORRHEA: ITS CAUSE AND TREATMENT

Yet another interesting contribution upon pyorrhea appears in *The Journal of the American Medical Association* for February 13 (p. 553). In this paper, Bass and Johns describe in detail their method of securing the entameba buccalis from pyorrhea lesions, and mention some very interesting facts regarding the pathology and pathogenesis of this dental disease. Of particular interest to the physician and dentist, however, is the further record of the experience of these investigators with ipecac and its alkaloids, emetine and cephaeline. These drugs, the authors declare, "are such perfect entamebicides that nothing better could be hoped for."

They have used emetine hypodermically in a large number of cases, and later have applied it locally in the mouth, but have not tried injections into the pockets, as employed with success by Smith and Barrett. While they understand that some particular pocket can be treated locally, with excellent results, more general improvement, in their opinion, will follow the systemic administration of the drug. Only in this way can all lesions be destroyed. By the time the disease has reached the stage to be recognized by the patient or by the physician or dentist, it mostly is far advanced in one or more places and there are many lesions infected with the entameba. This indicates the necessity for systemic treatment.

However, the authors lay considerable stress upon the use of local applications of ipecac [Still better, of emetine solution.—Ed.] for the purpose of preventing reinfection. Such solution should be forced in between the teeth, the excess being spit out. In spite of the prophylactic local use of emetine, the authors have observed that relapses or reinfection have occurred in one or more of the lesions in about 12 percent of their patients, within four weeks of the time the emetine treatment was suspended. In case there is such a reappearance of the parasite, the full course of emetine injections should be repeated, they declare.

Considerable stress is laid upon the importance of the proper dental treatment of the diseased tissues. When there is necrotic tissue surrounding the root of the tooth and much of the peridental membrane supporting the alveolar process has been lost, we cannot expect to restore the patient's mouth to its former healthy, natural condition. The greatest benefit from the emetine treatment therefore depends upon the early use of emetine, before great destruction of tissue has occurred. Yet, even in advanced cases, the progress of the disease may be arrested.

STILL MORE ABOUT PYORRHEA. PERIOSTITIS DENTALIS

Another article by Bass and Johns on pyorrhea alveolaris appears in the February number of *The New Orleans Medical and Surgical Journal*, on page 671. In this paper, the writers declare that amebas (chiefly, if not wholly, of the species entameba buccalis) are demonstrable by proper means in the lesions of pyorrhea alveolaris in all stages of the disease. On the other hand, they have not been able to demonstrate the presence of these parasites in material taken from healthy gums. They have, however, found the organisms in lesions which did not seem to extend to the alveolar process. It is their belief that these lesions are evidences of the early stages of a disease which later reaches the alveolar process and finally, through destruction of the peridental membrane, results in loss of the teeth. What we call pyorrhea alveolaris, therefore, is, in fact, the late stage of a disease which should more correctly be called periostitis dentalis.

Recurring again to the subject of treatment, the authors now report 200 cases of Riggs' disease treated with emetine. After this drug was given in 1-2-grain doses for

three successive days, the amebas persisted in only from 2 to 5 percent of the cases. However, the organisms disappeared only in a small percentage of these, following a single dose of the emetine. In most cases they do not disappear if the interval between the doses is more than twenty-four hours; which emphasizes the necessity of giving these injections at intervals not greater than twenty-four hours apart and for at least three doses. Sometimes this course of treatment may be extended to six days, depending upon the extent of the disease in the particular instances.

In about 12 or 15 percent of the cases apparently cured by this course of treatment, the lesions have reappeared after an interval varying from a few days to five weeks after cessation of emetine treatment. In a few instances, recurrence was observed also in the case of patients who had applied fluid extract of ipecac when brushing the teeth, which, theoretically, should tend to prevent reinfection. This suggests the desirability of using a preparation more reliable and more nearly standard in strength than ipecac for the local treatment. For local use, we urge employing a 1-2-percent solution of emetine hydrochloride, as recommended by Barrett and Smith.

Should the trouble recur, it is also desirable, as Bass and Johns point out, to repeat the course of emetine treatment after a proper interval.

"It should be understood," write the authors, "that the emetine destroys the amebas by some specific action, but that, after the amebas have been destroyed, the lesions remain and will require a variable length of time to heal, according to the extent and character of the lesion and of other influences. The pocket is usually very much more extensive than would be supposed, and those interested in the disease may be enlightened by passing some suitable small instrument to the bottom of pyorrhea pockets. Upon careful dissection, we find that the pocket contains necrotic and, often, tough tissue (especially periosteum in the bottom), and more or less carious bone. For nature to liquefy and remove this material, will, necessarily, require a considerable length of time; during which there must continue to be more or less pus formation. As long as the lesion is not healed up, it naturally offers favorable soil for reinfection."

This again indicates the necessity for proper dental treatment to remove carious or necrotic tissue, as well as persistence in the

local and general treatment where the response is slow.

PHYSIOLOGIC ACTION OF PANCREATIN

In the parenteral administration of pancreatin (pancreatic extracts) for carcinoma and tuberculosis, various toxic phenomena were observed in connection therewith, and this toxicity has been looked upon as an inherent property of the pancreatic ferment. This now is denied by F. Mueller and S. N. Pinkus, of the Institute of Animal Physiology of Berlin. The contention of these investigators (*Biochem. Zeitschr.*; cf. *Ther. Monatsh.*, 1914, No. 8) is, that, the more refined the pancreatic product, the less pronounced its toxic side-effect will be.

Thus, for illustration, they instance and compare Fairchild's trypsin with several brands popular in Germany, to prove their point. The latter preparations, of unsatisfactory permanency and having a peptic index ranging from 32 to 64, produced those toxic phenomena generally attributed to them.

On the other hand, the Fairchild enzyme, while markedly stable and showing a peptic index of 4000, virtually was devoid of untoward side-effects, barring only reduction of the blood pressure. And even this effect was shown not to be attributable to the enzyme itself, for it was not removed by the destruction of the trypsin by means of heat.

BULGARIAN BACILLUS ANTAGONISTIC TO CHOLERA

An interesting case in which Bulgarian buttermilk contributed to the cure of a person who was a vibrio-carrier, is reported, in the *Militaerarzt* (Jan. 9, p. 10), by Dr. Karl Roesler, commander at the imperial hospital for epidemic diseases at Troppau (Austria). This occurred in 1911, when the author was connected with the Hygienic Institute of the University of Graz, Styria, when a number of true cholera cases occurred in those regions, the true nature of which was bacteriologically verified.

The patient in question was one of the sister-nurses who became infected with the cholera-vibrio and was found to pass the infective microbe regularly in her stools, as established by daily control. When for this reason the nurse at last was to be ordered discharged, the microscope suddenly, one day, revealed the absence, from the stools, of the cholera-germ, and this negative result

was observed on two subsequent days. A searching investigation thereupon being instituted, it was revealed that the sister had of late been drinking yoghurt-milk at irregular periods.

As a consequence of this revelation, the nurse now was ordered to drink this Bulgarian buttermilk regularly in liberal amounts, whereupon in about three weeks she became absolutely free from the infesting cholera-germs, and so continued after omitting the yoghurt.

Doctor Roesler suggests further experiments in this direction (under strict control, of course), first trying vibrio-carriers, then passing on to mild cases of cholera. The presumptive agent in this cure is the Bulgarian bacillus, although the lactic acid might be a factor. Incidentally, tests *in vitro* might not be amiss.

PERMANENCY OF RESULTS OF NEPHROPEXY

Having instituted inquiries as to the after-results of fixation of floating kidney, W. Billington (*Brit. Med. Jour.*, 1914, p. 1914) secured the subsequent history of 97 cases, as related by the respective family physicians. These reports establish the fact that the greater proportion of the subjects remain free from symptoms after a considerable time, and only in a few of them had the anchored kidney again become movable.

CARAMEL AS A NUTRIENT FOR DIABETICS

E. Graefe, of the Medical Clinic at Heidelberg, suggests caramel as an article of diet for diabetic patients (*Muench. Med. Woch.*, 1914, p. 1434), he having found it not to increase to any extent the excretion of sugar, while generally leading to an amelioration of the acidosis; thus providing a useful and acceptable source of considerable calories of carbohydrate origin, even in the gravest cases. In the latter, the daily ration is set at from 100 to 200 Grams, after the directions for Noorden's oatmeal-cure; otherwise, in conjunction with garden vegetables, carbohydrates, fat, and albumen.

While such a caramel, palatable and almost free from sugar, is commercially supplied (Doctor Graefe mentions E. Merck), it may be prepared, best, from grape-sugar, by heating it, dry, in an aluminum pan or capsule at between 140° and 150° C., until properly converted. This, though, we may

add, is a somewhat difficult task for an uninitiated person, it being the easiest thing to get a bitter, overheated product.

SALVARSAN IN SCARLATINA

Excellent results are reported by Lenzmann, of the Diakonissen Krankenhaus at Duisburg (*Ther. d. Gegenw.*, 1914, p. 243), from the use of neosalvarsan in 47 cases of scarlet-fever; only 2 of the patients succumbing; one from streptococcus sepsis, the other having arrived in a comatose state severely sick with the fulminant form. In 2 of the patients, otitis of the middle-ear occurred. Otherwise, there occurred not a single instance of nephritis, recurrent lymphadenitis, suppuration or rheumatoid troubles. Neither were any untoward side-effects observed. The beneficial influence soon was evidenced in amelioration of the faucial troubles, a step-like recession of temperature, and improvement of the general condition.

When practicable, the neosalvarsan was administered intravenously; otherwise, intramuscularly. Children between the ages of 3 and 8 years received 0.15 Gram as the largest single dose; those between 8 and 15 were given 0.3 Gram; and the maximum single dose was (in rare cases) 0.45 Gram. However, even for adults the initial dose best is started at 0.15 Gram, and it should be proportionately small for children.

If the first (very small) dose does not induce vomiting, diarrhea, rise of temperature or general disturbance, then a second, slightly larger, dose is injected; and this dose repeated a few times, as may be indicated. Every fresh access of fever is to be combated with another injection of the neosalvarsan. Only very rarely was Lenzmann obliged to give more than a total of 0.8 Gram, in the case of grownups.

TREATMENT OF SCARLATINA WITH CONVALESCENT SERUM

Doctor Lenzmann, in his report on the value of neosalvarsan in scarlatina, having touched, somewhat negatively, upon the benefits derived from convalescent serum (see citation above), a commentator, R. Koch, of Frankfurt a. M., briefly adduces the following facts (*Ther. Monatsh.*, 1914, p. 591):

The reason why Lenzmann failed to get best results from the serum-therapy is, that he did not follow more closely the method as

previously developed by Reiss, Jungmann, and himself (Koch), by which all three had accomplished far more than did the former with salvarsan. Contrary to Lenzmann—who thinks it might prove useful as an adjunct—it is exactly in the most critical cases, which the speaker pronounced beyond medical aid, that convalescent serum had effected cures. As to the suggestion that equivalent results might be attained with normal human serum, his own experience went to prove a greatly superior efficacy of the convalescent serum in scarlatina gravis-sima.

MINERAL OIL TREATMENT OF GASTRO-INTESTINAL ULCERS

Our good friend, Dr. A. L. Benedict, who contributes so frequently to *CLINICAL MEDICINE*, offers an excellent suggestion for the treatment of ulcers of the stomach or bowels in *The American Journal of Gastroenterology* for April, 1914. For several years he has been using pure paraffin oil, ordering the administration of one-half ounce three hours after meals and late in the evening. Bismuth in some form is generally emulsified with the oil, and camphor, phenyl salicylate, menthol, and other remedies may be mixed with or dissolved in this menstruum, as indicated.

The mineral oil probably acts as a protective lubricant, and as a base for distributing the bismuth or other contained drug over the lesions. It also seems to be negatively antiseptic. This remedy has been used with good results, not only in the treatment of gastric and duodenal ulcer, but also for malignant ulcers of the intestine, in which conditions it seems to arrest the development of the disease sometimes for a very long period.

TREATMENT OF MORPHINE ADDICTION

Already a demand for intelligent help in the treatment of drug addiction is beginning to reach us. The article by Doctor Waugh, on another page, will answer most of the questions asked, but we are sure that suggestions of all kinds will prove helpful. For this reason, we print herewith the formula used in the Chicago House of Correction and the emergency hospitals of this city, which during fifteen years have been called upon to treat more than 3000 cases of narcotic drug addiction. The method of treatment is reported to *The Journal of the American Medical*

Association, by Dr. Charles E. Sceleth. (See the number of March 13, 1915, p. 927.)

Doctor Sceleth says that when patients enter the hospital they are given a preparatory dose of a saline cathartic. The basis of the medical treatment is the following:

Scopolamine hydrobromide.....	gr. 1-100
Pilocarpine hydrobromate.....	gr. 1-12
Ethyl-morphine hydrochloride	
(dionin).....	gr. 1-2
Fluid extract cascara sagrada.....	min. 15
Alcohol.....	min. 35
Water, q. s. ad.....	dr. 1

The dose is varied according to the extent of the addiction. Patients vary in their daily consumption of morphine from 1 or 2 grains to as many as 60 or 90 grains a day of morphine. When more than 10 grains of morphine per day are being taken, 60 minims of the above mixture is given every three hours day and night for six days. On the seventh day the dosage is reduced to 30 minims, the eighth 15 minims, and on the ninth 15 minims three times a day instead of every three hours day and night. On the tenth day the mixture is discontinued and strychnine nitrate, 1-30 grain, three times a day, is used. On the eleventh day strychnine nitrate, 1-60 grain, is given, and this is continued for a week. During the first five days only light diet is given, but patients are encouraged to take liquids freely.

If a patient is using less than 10 grains of morphine a day, the dose should be 30 minims of the mixture to begin with. If he is using less than 5 grains, 15 minims is used as a starting dose. During the first three days the patients suffer from insomnia, and in about 10 percent of the cases vomiting; this is to be expected. If the pulse goes below 40 or over 120, the mixture is stopped for a single dose. If there is collapse, 1-2 grain of ethyl morphine hydrochloride or 1-4 grain morphine is given hypodermically. In about four percent of the cases a scopolamine delirium may develop. In such instances the mixture should be given without scopolamine for two doses, and then continue with scopolamine in 1-200-grain doses.

During the treatment no other drugs should be used. After the fifth day the patients will have no further desire for morphine. Up to this time they care very little for food, but after the fifth day they develop a ravenous appetite and will gain weight rapidly. Extremely emaciated patients will gain a pound a day for the first thirty days.

Doctor Sceleth declares that the results obtained by this method have been found

efficient; in fact, the results are more lasting and, all things considered, more satisfactory than from the Lambert-Towns treatment. The patient should be directly under the physician's care, but after eleven days, the strychnine treatment of seven days may be safely intrusted to the patient.

We would suggest that the active-principle remedies in this formula could be given with more safety and satisfaction in granule form than in the anything-but-pleasant fluid mixture advised. Hyoscine hydrobromide may be substituted for scopolamine.

TYPHOID VACCINATION IN THE BRITISH ARMY

From a newspaper report of an address given by Sir Frederick Treves before the Royal Society of Arts, we learn that since the beginning of the European war, there have been only 212 cases of typhoid fever in the British expeditionary force, and of these 173 cases occurred among persons who had not been inoculated against the disease. Thus far there have been but 22 deaths from typhoid, and in not one of these cases had the patient been vaccinated. Thus far not a single death in the expeditionary force of the army has occurred among inoculated individuals.

AN EMBALMING FLUID, AND HOW TO USE IT

We have had several inquiries for a satisfactory embalming fluid, with directions for use. We print herewith a formula devised by workers in the Hygienic Laboratory of the United States Public Health Service, and now much used in different branches of the Government for embalming on shipboard. The composition of this fluid is described by Dr. Edward Francis, of the Public Health Service, in an article published in the February, 1915, number of *The Military Surgeon* (p. 161). The formula follows:

Formalin (40 percent formaldehyde) . . . Cc. 12.5
Borax (sodium borate, $\text{Na}_2\text{B}_4\text{O}_7$) . . . Gms. 5.0
Water sufficient to make Cc. 100.0

NOTE.—Should the strength of the formalin be below 40 percent, its amount must be proportionately increased, using, for example, 15 Cc. of formalin of only 33 1-3 percent strength.

This preparation has been found stable in composition after standing two years and eight months, and effective in preserving

human subjects exposed for two months to a temperature of 98° F.

Formaldehyde is undoubtedly the best preservative and disinfectant, and it is the essential ingredient in nearly all commercial fluids. One serious objection to its use is that it bleaches muscular tissue to an ashy gray. The investigators of the Hygienic Laboratory found that this result could be overcome by adding an alkali, but in the selection of the proper alkali it was learned that most of them cause deterioration of the formaldehyde after several weeks' standing. Fortunately borax supplies the desired alkalinity without producing more than the slightest deterioration of the formaldehyde, even after having been made up for nearly three years. Borax also has the advantage of being in itself a preservative.

This embalming fluid is injected into the arterial system in quantity equal to 15 percent of the body weight, as follows:

Inject each femoral artery
toward toes with 2 percent body weight
Inject each brachial artery
toward fingers with 1 percent body weight
Inject one common carotid
artery toward head with . . . 2 percent body weight
Inject same common carotid
artery toward heart with . . . 7 percent body weight

Total amount of fluid . . . 15 percent body weight

It is not necessary to withdraw blood from the veins before injecting the fluid, although there is no objection to so doing; nor is it necessary to inject fluid into the thoracic and abdominal cavities. Autopsied bodies are to be treated the same way as others, with the addition of a liberal amount of cotton and embalming fluid to the cavities of the abdomen, chest, and skull. Plug the anus, mouth and nostrils with cotton soaked in the embalming fluid. Wash the entire body, including the face, ears, and hair with the solution. If it is desired to keep the body for a long time, drying can be prevented by the application of vaseline and bandaging.

NOCTURNAL ENURESIS IN CHILDREN

A disagreeable concomitant symptom in several cases of nocturnal enuresis observed by Dr. C. W. Crawshaw and reported in *The Lancet* for May 30, 1914, was excessive blinking of the eyelids. In two cases this symptom disappeared in a few days after the author began the administration of a thyroid preparation in conjunction with calcium lactophosphate.

Miscellaneous Articles

On the Firing-Line

THERE is something intensely dramatic in going up and down the line of the trenches, calling at the receiving hospitals, which are from two to five miles apart, and sometimes more, and looking over the methods and means of taking care of the poor wounded boys and sending them to the rear.

As the days go by, one is immensely impressed with the perfection of the system. The wounded are picked up at night and carried to the receiving hospital, mostly by motors, and from there are distributed to the rear with an accuracy entirely unknown in any previous war.

Every now and then there is evidence of a coming night assault. The air-men and the shots on that particular part of the line are unmistakable indications that a charge will be made.

We in the rear get this information by 'phone, and the ambulance-corps of motors and the receiving hospital at that neighborhood make active preparations for what they know will certainly happen. After dark or sometime in the night, a wild, desultory roar of magazine-guns will be heard, and we know the trenches have been assaulted.

Sometimes these charges are repulsed. Then, again, the enemy drives the men in the trenches back, and in a very short time a new force of men is hurried up, and the trenches are retaken. Then comes a lull, and the Red Cross surgeons and stretcher-bearers go out to gather up the wounded. Sometimes the lines are so close together that continual sniping occurs, that is, sharp-shooting, and there is great danger in picking up the fallen men. Usually, after dark, men can be quickly gathered up on stretchers or in the arms of assistants and carried back a few hundred yards, where the Red Cross surgeon, provided with a flashlight, determines what should be done; then the motor ambulances carry the wounded back a mile or so to the receiving hospital.

All this is of daily occurrence. Along the line of about thirty miles, under my direction,

charges and countercharges are taking place every night. The surgeons and stretcher-bearers have little or no time to rest except during the day, from ten on to four or five in the afternoon. Sometimes every night, for a certain period, there is a call for every surgeon on the whole line, and they must be prepared for anything that comes.

The frozen ground and snow make it possible to go about very easily, although the cold is intense at times and men suffer intensely. It will occur to the reader that the work of the Red Cross surgeon, or the man on the firing-line, requires a certain adaptability that is not very common. A young man may be very learned in many things and, yet, show very bad judgment as to the first aid he gives to the wounded.

Where the wounds are very severe, the surgeon is ordered to pin his number on the coat of the wounded man. This is noted when the latter reaches the receiving hospital; then, if the surgeon has neglected something he should have done, the supervisor in the hospital will reprove him with great severity.

Where the work must be done instantly and there is no time for consultation, the language must be brief, exact, and to the point. Oaths and expletives are far more common than soft words. After a while, a blundering doctor is sent to the rear or often he asks to be relieved. A surgeon who has had several very narrow escapes from injury and death sometimes becomes demoralized and shows a degree of cowardice that renders him incapable.

Incidents like the following are not uncommon. Where the lines have been assaulted and forced back and desperate efforts made to retake them by flanking and the use of machine-guns, there will come word to the surgeon that some officer is lying out in the firing-zone, wounded. Someone has seen him, and the man has begged for help. The surgeon appeals to the stretcher-bearers and anyone present to take the risk of bringing him

in, and even the surgeon himself will take the risk of getting killed in his efforts to help. As a rule, on these occasions, great courage is shown, and many a poor fellow has been brought in at the risk of two or three lives. Most of the officers on the firing-line are captains, colonels, and from that down. Many of them are very brave men and for hours will lie wounded on the field without murmuring. The dread is not of the dying, but of being captured.

There is really wonderful system developing along the lines, and every day becomes more and more perfected. The field-surgeon himself becomes very expert; many of the first dressings are not removed at the receiving hospital, but are retained until the patient reaches the great central hospitals at Boulogne.

This end of the line is within ten or fifteen hours' ride of the great central hospital, and the railway transportation is very perfect and uniform. After a dose of morphine and some food, the patient is put on a railway train, and sleeps profoundly until he reaches the central hospital.

Although the weather is cold, sometimes very heavy snow, sleet and rain, the greatest sufferers are in the trenches, where the water settles and where the chance of being injured by frost is very great. This danger is overcome to a large degree by the kitchen-motors that go around as often as they can.

One observes great difference in the fatalities at different points. Where the lines are in close proximity and the assaults are frequent, there are occasions of very low mortality and injuries. At one point on the line, for over a week the Germans made tremendous efforts to break through. They succeeded in taking the trenches, but the next night were driven back. Then in the daytime fierce cannonading followed.

During that week, the mortality was very low. The surgeons and the receiving hospitals had very little to do, although great preparations had been made, supposing there would be very serious casualties. Finally the effort subsided and the Germans were driven back several miles, and a lull has taken place at that point since then.

A few miles farther off, another attempt was made, and the casualties and deaths were frightful. Two receiving hospitals were brought up, and the wounded were very large in numbers.

The gunshot and contused wounds from fragments of balls are very severe. There was much speculation as to why this should

be so, and no one could give a reasonable theory.

Many new regiments are coming into service, and it is noticed that the old veterans are kept close in the rear, so that in case of difficulty they can be called upon. There is something depressing in the continual assaults, capturing, and being driven out of the trenches and then retaking them. So little seems to be accomplished, and, from the surgeon's point of view, there seems to be a greater perfection of details and exactness like the movements of the machine. The cannons are firing all the time; when the air is clear, their aim is very exact, when it is cloudy, it is otherwise. The trenches are near each other, and the sniping of every person who is exposed seems more like murder than real warfare.

In the meantime, the country is being devastated. Houses, fences, barns, and everything along the line are all in ruins. On the line that I am watching, there is not a village that is occupied, except by soldiers and persons attached to the army. The inhabitants are all gone.

What we, as surgeons, learn here is, sharp, instant diagnosis and prognosis, and how to apply the best means for the time and occasion. This must be made at all times and under all circumstances with exactness and accuracy, and then we must make disposition of the patient at once.

We have no time to make records, except the briefest notes, so that in the future knowledge of the work must be largely a matter of memory. In the field hospital, something more must be done; but here the records are meager.

The motor ambulances are a very large element in the success of this work. This new war brings new conditions to be met, with new means and measures to be applied.

"BRITON."

EMETINE HYDROCHLORIDE — WHERE SHALL I INJECT IT?

I have found that by injecting a solution of emetine hydrochloride beneath the mucous membrane of the mouth at about the junction of the muscles of the cheek with the maxillary ridge, and about on a line with the first molar tooth, where the tissues are loose and flabby, I can introduce the remedy without producing any strain on the tissues. Thus introduced, the emetine produces no irritation and there are no after-effects, while the pain is much

less than when it is injected into the arm or beneath the skin at other points.

There are four excellent points in the mouth for the introduction of this solution; namely, the tissues of the superior and inferior maxillary on each side, so that consecutive injections never have to be introduced at the same point.

Again I want to say that when this site is used, there is no reaction and absolutely no irritation.

A. C. COOK.

Georgetown, Ky.

[There is occasionally some irritation at the point of injection when emetine hydrochloride is given subcutaneously. This is not a constant result, some patients apparently suffering no inconvenience worth mentioning; yet once in a while it is quite troublesome. As we have pointed out, discomfort can often be avoided by injecting the alkaloid first into one arm, then into the other. At any rate, Doctor Cook's novel suggestion is worthy of careful investigation. We suggest, however, that great care be taken until familiarity with the method is acquired. Begin with a very small amount of the solution, introduce it with caution, and watch results. Then report. One of the members of our staff tried injecting the emetine solution into the mouth in the locality advised by Doctor Cook, and in his case it caused quite severe pain persisting for about an hour. He doesn't favor the method! We are extremely anxious to know of the experience of other physicians with the method.—ED.]

AN EXPERIENCE WITH EMETINE IN HEMORRHAGE

Since emetine hydrochloride is occupying such a prominent role in the treatment of so many conditions, I wish to add my latest experience with it, this time in controlling hemorrhage.

A little girl was knocked down and run over by an automobile, the front wheel passing diagonally across her face, causing profuse hemorrhage from one ear and the nose. I tried the usual remedies for stopping the bleeding, but after four hours had not succeeded in controlling the hemorrhage from the ear. I decided to try emetine. One injection of 1-3 grain of the hydrochloride put a stop to the bleeding within a few minutes. I have had no further trouble with the case, except in relieving the bruising and soreness.

Acting upon the suggestion made by someone in the March number of *CLINICAL MEDICINE*, I am trying this remedy out in a case of psoriasis of several years' duration. If the results are good, I will report the case later.

E. M. MURPHEY.

Macon, Miss.

[We hope none of our readers will lose sight of the value of emetine in arresting hemorrhage simply because it has come so strikingly into the foreground as a remedy for pyorrhea. The alkaloid seems to have the power of checking loss of blood from almost any site. Dentists are already beginning to use it in hemorrhage following the extraction of teeth, and we even hear that French army surgeons are employing it in cases of internal hemorrhage following perforating wounds of the chest.

I sincerely hope that Doctor Murphey will keep his promise and let us know how that case of psoriasis comes out. So far, the only report of experience with the drug in treating this disease comes from a Savannah (Georgia) dentist, who apparently effected a complete cure of a case of psoriasis through local treatment of a coexisting pyorrhea. The results were so brilliant in this instance that we are anxious to hear from others. We hope that many of our readers will report.—ED.]

SCIATICA—A COMMENT

Replying briefly to the editor's comment upon my article on page 275 of the March number of *CLINICAL MEDICINE*, I want to add that the pain produced by hypodermic injection, properly given, is usually very slight. My patients prefer the pain of the needle to that of the disease, saying that it gives great relief to the sciatic pain.

I always give a laxative. On page 275 you will notice that I mention giving such preparations.

F. E. HUFNAIL.

Minneapolis, Minn.

SOMETHING MORE FROM THE SUNNY SOUTH

Our doctors' exchange seems to be growing in favor. The latest accession to the list of exchangers is Dr. T. C. Murphy of Pass Christian, Mississippi, who offers soft-shell pecans, grape-fruit, Satsuma oranges, and ribbon-cane syrup.

Any doctor who is interested in any one of these eatables should communicate with Doctor Murphy.

WILD-GROWING HERBS FOR SPRING SALADS

While dandelion shoots and pepper-grass are used all over the country as cheap and delicious salads, as a grateful and wholesome addition to the menu after the dreary winter season, a lady correspondent of *The Record-Herald* (Chicago) calls timely attention to a number of other plentiful herbs of the field suitable for the same purpose. Inasmuch as the family doctor also is looked upon as a family adviser, he can add to his popularity by spreading this useful information, while doing a philanthropic service in the case of those families who are obliged to husband their meagre resources rigidly. For their sake particularly we repeat here the salient points of the letter in question.

There are, this good housewife says, few persons who have knowledge of the splendid salad-plants that grow right at the doorway and may be had for the picking.

First of all, the common dandelion yields one of the most delicious salads when the first young leaves make their appearance. A sharp-pointed knife should be used to lift the plantlet with its roots from the ground. The plant is then washed and scraped and the outside leaves are clipped off, leaving a fine feathery foliage with a white root, tender and delicious. When the dandelions become a dark-green, they are unfit for salad, but may be used as table-greens. When the leaves of the growing plants are just turning, they may be covered over with a board for two days, when they will become bleached.

Plantain, considered weeds, when young makes a splendid salad, and may be bleached the same as the dandelion. The young sprouts of pigweed or lamb's quarters are a desirable addition to the salad-bowl. So, also, the curly and the broad-leaved dock and sour-grass form a delicious salad used either alone or mixed with some other green plant. The young shoots of the milkweed, when not more than four or five inches high, tied in bundles and cooked like asparagus and served with French dressing, will yield a salad fit for any epicure. The young shoots of the primrose also are good cooked this way, making, when mixed with the milkweed, a fine combination. Fetticus is found in all cultivated fields. Then there are cowslips—

the tender shoots of the star of bethlehem—and the better-known pepper-grass, mustard, as well as beet tops; all of which are good for salads, and a French dressing holds good for them all.

This information comes at the right time to be of value, and doctors should be able to add to it, from personal knowledge of their own local flora. It is well to give this knowledge to the good housewives, to bear in mind.

WHAT DO YOU REALLY KNOW?

If you had asked a doctor fifty years ago what he knew, he would have answered, "I know that blood-letting is the best treatment for inflammation." And he thought he knew. Yesterday, in a conversation with me, an old sage made the assertion that no one except a demented old woman would tell you that the birth of Jesus was in any way different from other children's births. This sage, too, is positive that he knows.

If you review your past years, you must acknowledge that much that once was knowledge to you was a mistake of ignorance, that you have had to unlearn much that you once "knew" to be so. The question, then, arises, What does any man know? You will answer, "Much is known, and is demonstrable." You answer further, saying, "I can take you into my laboratory and demonstrate to you that certain germs are the cause of certain well-known diseases."

But, suppose you do demonstrate to me that certain things are facts, does that prove that they actually are facts or does it only show that you have convinced me? I may be exceedingly credulous and may be made to believe much that is not true. The educated world might be a unit on a certain proposition today, yet, tomorrow the whole thing prove a farce.

I ask you what do you know, and are you sure that your supposed knowledge is founded upon unchangeable facts? Do you not find yourself running up against your most sacred ideas and discover them only to be creations of the imagination? And do you wonder that the most learned tell you that they do not know anything, that they are only beginning to find out a few things?

Does it discourage you when you realize that your past experience is only a web of cruel uncertainties? And do you exclaim with Solomon, the wise man, that "all is vanity and vexation of spirit?" This sage said, "Get wisdom," and tried to tell us the

value thereof. You have spent years in trying to get wisdom, and what is the result? Your friends laugh at you when you try to tell them what you know. They say, "Poor old man, he is in his dotage and does not know anything." Are they right or are they wrong, and who is to be the judge? And of what value is the opinion of the judge after he has pronounced you ignorant or wise? Does the judge know?

One time I wrote an article entitled, "Plausible Guesses," in which I acknowledged that most of my views were founded upon the plausible guesses of my predecessors and that, if their guesses were correct, mine might be, too.

It is very fashionable to judge and condemn the seemingly ignorant. You often hear it said that this or that individual "ought to be put in the asylum." The self-appointed judge does not mean harm to the victim, he only is trying to diffuse his knowledge. The same measure might have been suggested in the case of the self-appointed judge himself—and should only a part of suggestions of this kind be put into effect, there would be "something doing" in the way of building asylums.

If I were asked to answer my own question, I should say that I am not positively certain about how much or how little I know—most probably not much.

W. P. HOWLE.

Charleston, Mo.

NAPOLEON'S ACTIVITY AND HABITS DURING THE CAMPAIGN OF 1813

The following narration is taken to some extent from a memoir of Major von Odeleben, who belonged to Napoleon's staff during the campaign of 1813. It is not directly on medical topics, but nevertheless of medical interest in so far as it demonstrates the extraordinary, almost supernatural working-power of that great man.

The most important part of Napoleon's headquarters was the cabinet in which he and his secretaries were working; it was the largest and the most suitable room in the building. When the emperor remained with his troop in bivouac, a tent, adjoining the one in which he was living and receiving, was erected to serve as cabinet, the one in a building as well as that in a tent had the most exact arrangements. In the middle stood a large table upon which the map of the seat of war was spread. On this map were sticking many pins with heads of differ-

ent colors, to designate the positions of his different army corps and of those of the enemy. The pins were placed by the chief of the topographic bureau, who had to work with the Emperor incessantly, and who was best informed of the positions. When the map was not in place at Napoleon's arrival, it had to be brought immediately, for it seemed to be more important to him than all the other things. During the night this map was illuminated by twenty or thirty candles. When Napoleon was riding on horseback, Caulaincourt had a map fastened to his chest. He was always nearest, to present it at the word "*La carte*."

In the four corners of the sanctum were placed small tables for the secretaries. As a rule, Napoleon dictated to them, fully dressed in his ordinary green uniform, often with his hat on, walking up and down. Accustomed to see everything that came to his mind executed with the greatest celerity, nobody could write fast enough for him. His secretaries, therefore, had to invent a kind of stenography.

"It is incredible," says von Odeleben, "how fast Napoleon spoke when dictating, and what perfection his secretaries had attained in this cipher writing."

Odeleben also gives us a very detailed description of how many and how manifold things of greatest importance were attended to, how many important orders were given, and how hard a day's work the secretaries had, acting as telegraph wires for the sparks coming from Napoleon's ever acting brain. He gives the arrangements made for audiences. Sometimes painful suspense reigned in headquarters, a significant silence, when the Emperor was in ill humor or a storm of such was threatening.

The transportation of the most indispensable vehicles was entrusted to two *chasseurs à cheval* of the imperial guard. These were called *chasseurs de portefeuille*, appointed to their posts of honor by the Emperor's adjutant. They had to follow closely the train when the Emperor rode in carriage or on horseback. The keys of the wallets were in the hands of Caulaincourt. When these couriers came in sight with their wallets, while the Emperor was riding in carriage, Caulaincourt dismounted, took the dispatches and handed what was the Emperor's to the Emperor. Very soon a shower of envelopes flew out of the wagon. Papers which had not yet been read in the cabinet were placed in drawers or pockets arranged for this purpose in the carriage. Napoleon read them

while riding, and what was not to be conserved was cut to pieces and thrown out the window. When no reports had arrived, the drawers and pockets were stuffed with Parisian journals, which were superficially looked over and then thrown out of the window; the same happened with novels for which the Emperor did not care after having read a few pages. Those following the train had opportunity to collect a little library.

The zeal of the restless soul, rejoicing in changeable impetuosity of a constant occupation with war, excluded all observation of regular hours. All that happened in headquarters came unexpectedly, but everybody had to be ready at the moment. Unforeseen times of rest, of departure, changes of routes and quarters followed each other. The transactions in audiences, the incoming reports, the arrival of couriers were the clock by which the time was divided.

All important plans for operations were made by Napoleon alone. Berthier was entrusted with the execution of the commands. When the last word had been dictated in the cabinet, Berthier would dryly say, "*La voiture! a cheval,*" and as by electricity, all who had to follow him came into motion. Only at this moment they learned what road was to be taken. The grand equerry (Caulaincourt) rode on the right side, General Guyot on the left of the carriage, the adjutants on duty, equeries, officers, pages, a couple of horses, one each for Napoleon and for Berthier, the latter being in the carriage with Napoleon, Rustan, the *chasseurs de portefeuille*, a guard of chasseurs—one officer and twenty-four riders—this was the train which always was following the Emperor, and was arranged with great exactness.

The cavalcade went on in sharp trot, like a storm, day and night, many miles; and who had to follow during the night in this whirlwind had no enviable lot, having to risk limb and life. As soon as Napoleon commanded "Halt," his and Berthier's horses had to be ready, four of the chasseurs of the front rank dismounted, formed a square around the Emperor and stood at shoulder-arms.

The same was done when he was on foot to inspect the vicinity and the enemy's position, only the square formed by the four chasseurs was then wider, so that he could observe in all directions. When the object was distant, one of the pages carrying a large telescope advanced and he or sometimes Caulaincourt lent the shoulders as basis for the telescope. When circum-

stances obliged Napoleon to remain for some time during cool weather in the open air, an immensely large camp fire was made for him by the chasseurs. They took the largest pieces of wood, whole beams or trees for the fire which was to indicate the Emperor's presence.

When at table, only Berthier would be with him, seldom others. All stood respectfully at some distance, forming a semicircle; or the generals had lit a *maréchal's* fire, as they had set a *maréchal's* table. In profound meditation or in conversation with Berthier, the Emperor would walk up and down, listening to the cannon in the distance or to other signs from his generals. When time seemed long to him, he snuffed tobacco, exercised his feet, threw pebbles or threw wood into the fire. He never could remain idle.

The restlessness of the Emperor kept everyone, the highest and the humblest, in excitement. With incredible facility, quick conception, he mastered the subjects of his dictation, dictating often for hours in succession, and his secretaries and adjutants spoke with admiration of the thoughtful, systematic and correct construction of his delivery.

When, while on the march, a courier came near, either Caulaincourt or Berthier had at once to sit on the ground to write down Napoleon's orders for the corps commanders. Sometimes almost all the officers of his staff were sent out. When expecting news from his generals, especially of an engagement, he was in great anxiety; in the middle of the night he would shout "*que tout le monde s'éveille,*" and one or more cabinet members had to rise. This was generally at one or two o'clock after midnight.

During the campaign Napoleon used to retire early, soon after 8 or 9 o'clock, or as soon as he had finished supper. The camp-bed was taken along on mules. Very seldom did he sleep for an hour in daytime; when this happened, it was after exhaustion in bivouac or after sleepless nights. The longest time he slept during the campaign of 1813 was once in Goerlitz, after the stipulation of the armistice of Neumarkt, namely, ten hours in uninterrupted succession, from 9 in the evening until 7 in the morning—an almost unheard-of event, as the servants gave assurance, and a sign that he was then for a short time free from sorrow.

Very often Caulaincourt had to work with him during the greater part of the night. Occasionally Napoleon would dictate from

2 to 4 in the morning and then lie down again. Often he was working all night long. Rustan had to bring him coffee. He promenaded in the well-lighted cabinet, dressed in a white gown and with a multicolored silk turban on the head, while he was conversing and dictating.

The traveling-carriage had sleeping-arrangements, so that he could stretch himself on the mattress and sleep as comfortably as in bed. Napoleon always was in uniform; during the night, however, he wore the turban. A lantern on the posterior wall lighted the interior of the carriage, four other lanterns on the four corners of the outside of the carriage lighted the road. Rustan generally was alone on the box. Six strong horses, led by two riders, drew the unostentatious green, two-seated vehicle hanging on the best of springs.

Napoleon's uniform, green with red collar and the star of the legion of honor, is so well known from pictures and paintings that it might be superfluous to describe it here. On cool and rainy days, he wore the world-known gray overcoat; on his birthday, he appeared at the dress-parade in the grand uniform of his guards—blue and red, with golden embroidery.

He had about eight or nine horses for his own use. The noblest and best of them was an Arabian cream-colored mare with black tail and black name. Napoleon's equestrianism has often been criticised. He rode at easy pace or at short trot, meditating while on horseback, and found special pleasure in riding over side- or footpaths, sometimes across the field, when no one could guess where-to. Sometimes he came thus, in mountainous regions, upon abysses, where he had to dismount. He disliked to be warned of obstacles or difficulties. Sarcas- tically smiling he would say, "*On ne peut pas?*" and generally did not desist until he had convinced himself that it could not be done.

Places which he disliked or hated, because they reminded him of some loss, he would pass by at fastest hunting-pace. Von Odeleben noticed this on the retreat through Haynau, where a battalion of Ney's had been annihilated; at Markersdorf, where Duroc had fallen; at Reichenbach; and near the so-called Saxon Rider, between Bischofswerda and Bantzen, where a French train with ammunition of more than 70 wagons—which was of the greatest importance to the army—had been surprised by Cossacks and exploded. It could plainly be seen how depressed

Napoleon felt while passing this road. A little dog happened to bark at his horse. This made Napoleon furious; he drew his pistol to shoot the dog, but the weapon missed fire, and in his anger he threw it away. Rustan hastened to pick up the pistol and put it in order again. All this went on in fast gallop; not a word was spoken.

Sometimes Napoleon's face was cheerful and while on the march he even would sing some Italian words. He also would then converse with the Prince of Neuchâtel or some other *maréchal*, or with Prince Eugene. While he was in good humor, his voice had something pleasing and confidential. He would call with familiarity, "Berthier" or "Grand Mortier" (Mortier was of high stature); but he adopted another tone when they were on duty, then he called "le Prince de Neuchâtel" or "le Duc de Treviso."

A. ROSE.

New York.

[This fascinating description of Napoleon is collated by Doctor Rose from his book, "Napoleon's Campaign in Russia in 1812," which we commend to everyone interested in "The Little Corporal."—ED.]

THE WAR-DISEASE, AND ITS PREVENTION

The trained medical mind, especially if it is in love with psychology, looks upon war as a disease. As such, its causes are as well known and as easily avoided as are the causes of yellow-fever or any other disease. Just at this time our political doctors as well as our medical practitioners, scientists, philosophers, and all true statesmen are studying this disease. It is well; for the present war in Europe is certainly the most unreasonable and inexcusable of any in the history of the world.

The socialist view, however, is optimistic rather than pessimistic, because we study war from the evolutionary standpoint. The class struggle, natural selection, survival of the fittest, materialistic conception of history, and the law of surplus value are some of the many factors we adduce to solve the problem. These are quite different from those considered by any other class of diagnosticians. In the evolution of industry, it is as certain that cooperation (i. e., socialism) must follow competition (i. e., capitalism), as it is that the latter followed feudalism, which in its turn succeeded barbarism. Each is a logical development from its predecessor. Each is

formed out of an integration of human units resulting from the disintegration of its antecedent, and parent, organization or state of society.

If I may be pardoned for manufacturing a few words that suit my purpose better than any I can find, I will say that moneyolatry and egololatry on the part of the few, and partyolatry, ecclesiolatry, and heroolatry on the part of the great mass of the people are the ultimate psychological causes of this barbarous contest. The rapid rise of democracy furnished only the occasion. The facts from the history and customs of the nations engaged in deadly fratricidal combat prove this. In the evolution of socialism (i. e., the collective ownership and democratic management of all the great natural monopolies used for purposes of exploitation), a conflict with the old order of things was inevitable. But it was the earnest unanimous wish of socialists that it should be bloodless. To this end they worked and voted to the very last. But they were overpowered.

It is safe to say that, had socialism enjoyed even five years more of progress such as had crowned its efforts in the past five years, not a drop of blood would have been spilt in the transition to the cooperative industrial commonwealth. This is evident from the fact that socialism is the only great rapidly growing world-movement that logically reaches and removes all the leading causes of this greatest scourge of all the ages—the hell of war. A study of socialist philosophy will demonstrate this fact to the satisfaction of any honest mind.

Now a study of the economic and political history of our own country brings to light the fact that the same causes that produced the European holocaust are all painfully in evidence here. The symptoms of the dread disease are so numerous and unmistakable that no diagnostician need be misled in locating the malady. An epitome of them was given in the October, 1914, issue of this journal (pp. 922-925); thanks to its broad-minded editors for giving publicity to my views.

Of course, we all say we want no war, but we shall certainly have it if we continue to take the road that leads to it. Capitalism, by permitting the few to monopolize most of the products of labor, together with the land, railroads, mines, machinery, and best-paying industries, thus forcing the masses into poverty and ignorance, necessitates war.

On the contrary, socialism, by keeping all children in school until of age, where they will study the science of complete healthy living,

giving every man an equal opportunity to work and the full product of his toil and thus doing away with profit, rent, and interest, removes forever both an idle parasite class and a homeless, hopeless, out-of-work class. Those two classes are outside the mental, and often physical, health zone, and are a menace to any country.

Dr. W. C. Gorgas, at the head of the United States Army Medical Service, the man who made Cuba and Panama fit to live in, said, if he could enforce but one sanitary measure, it would be, to double the wages of the working class. Socialism, then, is the only sure remedy for the disease of war. It will remove its cause. We should democratize war. All should have a chance to vote on it before it is declared.

In conclusion, I wish to correct a few mistakes that appeared in my article above referred to. The statement that \$72,000,000 was cleared in the year 1912 by "certain packeries" was questioned by the editor. Their official annual report forms the basis of my statement. In my assertion that 100 families now own half of all our wealth and "largely control the rest," the types made me say "what we call the West." There were several other verbal errors, but they do not alter the sense.

The editor's comment shows that he has not studied socialism from the socialist standpoint, much less the true economic condition of our country. Wherever the first steps in socialism have been tried, as in the Panama Canal, our mail service, free schools, and so on, they have proved successful. All we ask is, a safe extension of this tried principle so that it will embrace the robber-trusts and monopolies.

All the "captains of industry" who really work will be amply rewarded under socialism. The "men of great creative powers" will also find much better scope and reward for their talents than they do now. As to "lack of intelligence and lack of effort" on the part of those out of work, a few weeks' tramping for a job will dispel that idea.

What I have learned in the last few weeks, in my canvass of seven counties for congress on the socialist ticket, fully confirms the position outlined in my article above referred to. Everything is mortgaged to the limit among the farmers. Cotton is selling at 6 to 8 cents. The best hogs bring \$7.00 to \$8.00 per hundred and bacon costs 38 cents per lb.; and so along the list. Negroes and "dagoes" are chosen to work at our packeries instead of white men. No wonder the country is up

in arms. The promise of \$2000 a year for a six-hour day under the socialist régime is based on our last census returns and Carroll D. Wright's 18th Annual Labor Report to Congress.

If it is wrong to help the feeble and the weak and the 4,000,000 to 7,000,000 now out of work to a condition in which they can help themselves and their families, then the Golden Rule is a failure and brotherhood an idle dream. But, the philosophical socialist looks upon the present world-war as being but the labor-pains of Mother Nature in giving birth to a higher civilization, from which will be banished forever the instruments of wholesale murder.

S. J. BROWNSON.

Fort Worth, Tex.

CAPITAL PUNISHMENT — FROM THE STANDPOINT OF A LIFE PRISONER

[The article following is a personal letter and was written the editor by Louis Victor Eytinge, who is serving a life sentence for murder in the Arizona State Prison, at Florence. We have corresponded with Mr. Eytinge for several years, and have already told our readers something about the remarkable work this brilliant man is doing. For several years, although a prisoner, he has been in business for himself, and today he has an income much larger than that of the average professional man. He is an organizer; he can write, as this letter shows; and he is already writing much for the magazines, for pay, although he gives special attention to the preparation of advertising literature, and to the framing of letters that "will pull."]

This is but a part of his work. Eytinge's interest in penology is intense, and I know of few men who can discuss the problems of crime and its punishment with such intelligence, and such compelling interest. The letter following is, in the main, a reply to an editorial which appeared in these pages several years ago. I sent him a copy of this and another editorial taking exactly the opposite position; both of these, presenting both sides of the question, were published in the same number of CLINICAL MEDICINE.

I hope every one of our readers will read this article carefully, and I also hope that among our readers will be found some men who will exert what influence they properly can to secure Mr. Eytinge's pardon. He has already been in prison fifteen years, he was

convicted on purely circumstantial evidence, he is today a man of character, of brilliant attainments, and he can and will do great things for the good of his fellowmen if he is given the opportunity. He should be free. Will you help make him so?—Ed.]

Yes, I managed to get here at last; and although there's a mountain of work on either side of this machine, I'm going to try to get something off my chest that has been bursting for expression ever since we opened up on this subject of criminals and criminology.

First, your editorial writer who argued (in your May, 1912, issue) in favor of the utilization of criminals for experimentation has not advanced a new thought. It is old, and if one studies ancient history a bit, we may find that slaves and condemned criminals frequently served as subjects of experimentation. Your correspondent is entirely in the wrong when he says that "life imprisonment has been tried and proven wanting." I boldly challenge the truth of this and assert in absolute contravention that legalized murder has been proven wanting—that it is an incentive to more violence.

Those states having the greatest number of legal executions are also the greatest in lynchings. Thus Georgia in the last 21 years had 216 hangings and 314 lynchings; Texas with 171 hangings also had 235 cases of mob violence. This ratio is continued in the North, so that there can be no claim as to the "negro danger." Look: Colorado in the same time had 16 hangings and 23 lynchings, and Indiana's 18 lynchings show a direct connection with her 14 hangings. On the other hand, Michigan, with not a single legal hanging, had but two cases of mob murder. Wisconsin, also without any legal hangings, had but two lynchings. These two northern states, both states with a rough population in their mining and lumber camps, had but four cases of lynching, while Ohio, Indiana and Colorado with double the population had 83 legal executions and 65 lynchings. Is there any connection?

California and Wisconsin have about the same population—both have a peculiarly agricultural community. California uses the noose; Wisconsin uses life sentence, and in the year 1910, as well as the years 1908, 1909, 1911 and 1912, there were six times as many murders in California as in Wisconsin. But objection may be made because of geographical difference. Let's go back to our closely-related states of Ohio, Wisconsin and Michigan. Ohio has twice as many murders in

proportion to population as these other states without the death penalty. Ohio in twelve years has averaged one murder conviction to every 56,000. Why? *Why?* WHY?

Your editorial writer says his proposition will be opposed by sentimentalists. Leaving aside the possible answer that sentiment is the noblest, purest, strongest, and most elevating influence in life—leaving aside those things, I want to say most emphatically that I do not oppose his proposition with any sentimental argument. I fight with figures that are black with facts. I fight for efficiency rather than theory. I have been a student of prisons and criminals for over fifteen years. I know what I know through personal contact with thousands of prisoners from the inside and from an earnest study of this subject from its scientific sides.

Let me quote the most famous executioner of the world, Monsieur Deibler, for scores of years the official French executioner. In his book you'll read that he asserts that for every legal execution he has handled he has seen, *as a consequence*, repetitions of the exact crime for which he beheaded some criminal just before. Pestalozzi gives an instance of four women who killed their infants, illegal children, after seeing another girl executed for the same crime! Is it not true that in times of war—even now, with Europe in war—murder increases, and that assaults and combats increase, all because of the firing of the blood lust in humans through knowledge of other blood lusts? Is this not true? Then, how may we say that legal blood-spilling, legal neck-breaking, legal murder, does anything toward deterring murder.

Let's take another side of the proposition. I have in my files a symposium of prison wardens on this subject, and over three-fourths of these are against capital punishment. These are not sentimentalists, they are not theorists—they *know!* Let me support my proposition with some matter taken from the greatest French criminologist, Gabriel Tardo. During the first quarter of the 19th century the annual average number of persons guillotined in France was about 120—in the next quarter it had dropped to 40 per annum; from 1850 to 1860 this yearly average dropped to 28. This in turn fell to 10 for the annual average from 1860 to 1879 and then down to 8 during the years ending with 1890, while from 1895 to 1901 but five annually were beheaded. These figures mean nothing unless we show the results of this "sickly sentimentality."

Now listen! Concurrently during these years, watch the falling off in murder trials. In and around the second quarter, say 1835 to be exact, the annual average number of murder trials was 2143, and this was reduced to 879 by 1885. The next ten years, ending 1895, showed an annual average of 439, just half! And this again was cut down to 356 for the ten-year period ending 1900. During the last eleven years 246 culprits were sentenced to death, and of these two-thirds were commuted to life imprisonment, yet despite this "maudlin sympathy for criminals," despite this "sickly sentimentality," the number of homicides kept decreasing! Is not that clear proof that the decrease in legal murder marked a decrease in private murder? Yet your editorial writer desires to first experiment and then inflict the death penalty on condemned prisoners. Does he desire to *increase* homicide in this country?

Let's take a little rest from figures now and bring up something all of us know something about. Every one of us has known of some young child of nine or ten playing around and having a boyish scrap with a playmate and killing him—yes, even planning the killing with boyish deviltry, in revenge for some boyish mischief.

Would any civilized doctor kill his child, if it should be such a boyish murderer? Would he not by parental, superior force deprive him of his liberty, until by lessons of kindness, by lessons that build for manliness and character, he might be led away from the criminal instinct? Is this not what all of us would do?

Now, then, the State is the parent; the murderer is the little son. The State has the power to restrain and teach—but, has it done so? Has it reached that point in civilization when a medical editorial writer proposes, not to restrain and after finding out why the crime was committed, after finding out what physiological deficiencies work the psychological processes that led to the killing, and then cure them, when a medical authority calmly proposes to experiment on the murderer; to cut and slash, and inject, and inspect the murderer to death that some processes in surgery or medicine may be demonstrated, instead of curing the cause for murder? Have we the parental point in our national growth? I should say not!

Your writer further says the "man who is planning murder justly counts on the extreme difficulty of bringing the crime home, * * * and even if convicted and sentenced the chances are so great that after a few

years a pardon can be had, that he may well conclude to take chances."

Has that editor ever talked at length with men under sentence of death—has he ever studied them intimately? If he had, he'd know that the real thoughts of the men were entirely opposite to what he writes. It is true that most murderers—and by these I mean those who deliberately plan their crimes—do not expect to get caught. That, however, is more or less true of every violator of every law, whether he be an abortionist or a married man indulging in a flirtation. No one expects to get caught. And yet, the strangest thing about it all, is the open and well-known fact that no one has ever "beat it." The Law of Compensation, even if man-made law does not, invariably catches up with the offender. That law cannot be evaded.

The murderer, however, does not expect merely "a few years and a pardon." He expects the rope or the chair to end it all and end it quickly. Wasn't that the cry of Johann Schmidt, the priestly slayer of his mistress? Didn't he say, "Oh, well, the chair will soon have it over?"

Now, I've known in my fifteen years of imprisonment, perhaps five score of deliberate, coldly calculating murderers, and perhaps nine hundred of the other kind, their crimes committed under impulse, passions, drink, emotion, and so on. Out of these five score of men perhaps twenty-five were executed, and though quite a few of these weakened in the last moments before death, practically all admitted to me that they were glad it was not a *life sentence*. I've heard dozens of other lifers, for whom there was little or no hope of release, say, many and many a time, that they'd have been better off hung—that if they'd known they were to get a life sentence, they'd not have committed the crime! A life sentence is absolutely the greatest punishment that can be meted out to an offender—at least *in his eyes*. So, then, the life sentence would have been a *real deterrent*.

He then offers, does your writer, *castration* as the ideal penalty for any lesser crime than murder. Delightful—the suggestion—delightful, but unfortunately he seems not to have been aware that castration can not be inflicted on any prisoner in these United States, except as a medical measure for saving life or health. Not as a punishment, anyway. Uncle Sam has a funny Constitution that says something about "no cruel or unusual punishments"—and, if you please, Uncle Sam's Circuit Court of Appeals has just

knocked out vasectomy, during this year of 1914. No matter how splendid castration or vasectomy might seem to medical theorists, it won't work with Uncle Sam's people, so let's leave it out of the discussion.

Yesterday I happened to look up a long list of folks who might have been castrated, according to the desires of your editorial contributor: there was John Bunyan, who wrote his immortal "Pilgrim's Progress" in a cell; there was Torquato Tasso, who delivered his epic, "Jerusalem Delivered," from his cell; there was Miguel Cervantes who gave us "Don Quixote" from his cell; there was the world's greatest storysmith, O. Henry, who learned to write in the Ohio Penitentiary. I suppose these and Bill Shakespeare, who was a poacher, would all have been castrated to suit the desires of your editor.

Yes, and where would Australia have been today, if all the convicts, who are the beggetters of the greatest families in Australia and New Zealand—if all the convicts were castrated? Seems to me like my studies in history have taught me that many thousands of splendid American patriots were also deported as "criminals," which they may have been. Suppose these, too, had been castrated, where would your editorial friend have been today? Oh joy—isn't it nice to think of our ancestors having been castrated? Then we'd have had no ancestors and we'd not have been! Funny argument, isn't it? But—castration is even funnier.

(*To be continued.*)

DOINGS OF THE SPONDYLOTHERAPISTS

We are in receipt of a copy of the Proceedings of the Third Annual Convention of the American Association for the Study of Spondylotherapy, held in Chicago last September. It makes exceedingly interesting reading, to say the least.

There is no doubt that Doctor Abrams has gotten hold of the real principle, of which our friends the osteopaths have been giving us the dry husks. In other words, just as the psychotherapists have been expounding and utilizing the relations of the brain to voluntary and subconscious functions, so Doctor Abrams has perceived and applied the relations of the spinal column to the involuntary and visceral organs.

We thoroughly agree with him that these relations are undeniable and important, and that they have not been given, in the past,

the attention they deserve. We congratulate Doctor Abrams, and the Association he has founded, upon its worthy efforts to put the subject in a place befitting its scientific importance and its practical helpfulness. They are doing their work well and thoroughly.

THE CURATIVE ACTION OF RADIUM

Once, in the dear dead days of long ago—it seems years ago, but in reality it was only in 1913—before the breach between England and Germany, Dr. Sigmund Saubermann, of Charlottenburg, delivered an address on this subject before the Roentgen Society, of London, in which he reviewed the progress of radium therapy up to that time. Radium Limited, U. S. A., has printed this lecture in pamphlet form, and is distributing it to the profession. Doctor Saubermann, as everyone knows, is one of Europe's foremost authorities on radium emanation therapy, and this booklet embodies the results of his research work for a period of over eleven years. The illustrations, some thirty-five in number, are probably the first of their kind ever shown in this country, and demonstrate clearly the effects of the rays and emanations. The booklet will be sent to any of our readers free upon application to the publishers, 25 West 45th St., New York, mentioning CLINICAL MEDICINE.

WHAT ONE PHYSICIAN THINKS ABOUT THE FEDERAL NARCOTIC LAW

I think the medical profession is under a great debt of gratitude to you for your fearless criticism of the Commissioner of Internal Revenue's interpretation of the Harrison Antinarcotic Law. I honestly believe this law to be the most drastic, puritanical, inquisitorial, and unfair legislative attack upon the medical profession that the reputable physicians of this country have ever been compelled to submit to. It subjects every practicing physician, especially every country doctor, to unnecessary, uncalled for, and trivial regulation, and it is a direct imputation upon his intelligence and honesty.

Let me give a practical illustration. Several nights ago I was called upon in my office to prescribe and treat a patient suffering from intestinal colic. I sent her six pills, each containing 1-64 grain of morphine, with explicit written and oral directions. Now this drastic law, according to the interpretation

of the Commissioner of Internal Revenue, requires me to record this act in a "suitable book," giving the name and address of the patient, the date, and the quantity of narcotic administered. I would like to ask any intelligent person why an act requiring my personal attention to prepare and send medicine for a particular patient is not as personal and professional as if I visited this patient and administered to him with my own hands a few of the necessary doses which he requires.

The object of the law is praiseworthy and commendable; but in its application it has been made most drastic and inquisitorial to the medical profession, which is least responsible for the sale of the narcotic drugs, while it is least troublesome and least drastic in its application to those who have been mainly responsible for this traffic.

JOSEPH S. BALDWIN,
Sanitary Officer, 6th District.

Freeland, Md.

[Doctor Baldwin feels strongly, as do many other physicians. However, I think we are all agreed that the law itself is good, and that such a measure was needed to put an end to the improper traffic in habit-forming drugs. While severe, we can all put up with its provisions—must do so!—but it seems hardly fair that the Commissioner should pile so large a share of the burden upon the shoulders of the general practitioner, especially upon those of our craft who dispense their own remedies. The writer confesses to a sense of irritation, but the purpose of the law is so good that he is trying hard to keep this well under control.

The latest regulation (issued since our editorial in this number was prepared) is one permitting dentists, oculists, and other specialists using large quantities of cocaine in office practice to make up stock solutions, keeping a record simply of the date when such solution is prepared and the date of its exhaustion, *without* record of the patients upon whom such solutions are used. All other physicians (meaning average general practitioners) must keep the records of patients, addresses, and dates of dispensing or administration. In other words, those who dispense large quantities of cocaine are partially exempt from the record-requirement; those who dispense small quantities of this drug are not exempt from anything!

These new rulings come so thick and fast that it is difficult to keep in touch with them

all. No wonder the average physician is confused.—ED.]

APPRECIATION FROM A DENTIST

I presume it is hardly customary for a dentist to become a regular reader of a medical journal, but, since I have been enabled to learn more from CLINICAL MEDICINE concerning pyorrhea than from any dental journal, I have decided to continue my subscription for another year.

I am glad that you are waking up the medical men to the fact that the diseases which we have been trying for many years to overcome are really of some importance, after all. If medical men will cooperate with dental men, a great deal of good will result.

C. R. HOLLISTER, D. D. S.

Manteno, Ill.

ANNOUNCEMENT

Dr. George F. Butler, Medical Director, Mudlavia, Kramer, Indiana, will hold office hours in Chicago, in the Peoples Gas Building, Michigan and Adams, from 2 p. m. to 4 p. m. on the first and third Saturday in each month, for the accommodation of those who desire to consult him personally or who wish special information concerning the Mudlavia treatment. Appointment may be made in advance by addressing Dr. Geo. F. Butler, Medical Director, Mudlavia, Kramer, Indiana.

LOBELINE SULPHATE USED IN CONVULSIONS

My first experience with lobeline I had quite recently, on February 15, in the following case: A boy baby, twenty months old, was suffering from tetanic convulsions affecting the whole body. The muscles were twitching, the face was purple, and there was great dyspnea. The onset was very sudden.

The treatment with lobeline began within fifteen minutes of the start of the paroxysm, and consisted in giving a hot bath, a warm enema, and vigorous massage, followed by applications of a hot, dry blanket.

Internally, I administered lobeline sulphate. I dissolved 1-50 of a grain of this alkaloid in one-third of a glass of warm water, giving 2 teaspoonfuls of the mixture every five minutes for 4 doses. I also gave the indicated homeopathic remedy.

Within five minutes, or soon after the first dose, there was relaxation; within twenty minutes, the body was limp and the eyes were

reacting normally; and in forty-five minutes the child was resting comfortably. There has been no recurrence of the spasms.

To say that I was pleased with the action of lobeline in this case, hardly expresses my feelings.

STANLEY SPRAGUE.

Stockton, Cal.

LOBELINE SULPHATE IN ANGINA PECTORIS AND ASTHMA

I have been using lobeline sulphate in a few cases of angina pectoris and in asthma, both cardiac and bronchial, but always have given it in combination with other remedies. I do not recall using it alone at any time, so, only can say that I am pleased with the effect of the following combinations, which I have administered hypodermatically:

For angina pectoris, acute attack

Lobeline sulphate.....gr. 1-100
Nitroglycerin.....gr. 1-100
Morphine sulphate.....gr. 1-8

For bronchial asthma, severe attack

Lobeline sulphate.....gr. 1-100
Morphine sulphate.....gr. 1-8
Atropine sulphate.....gr. 1-50

For cardiac asthma

Lobeline sulphate.....gr. 1-100
Nitroglycerin.....gr. 1-100
Digitalin.....gr. 1-30

JAMES R. COOPER.

Trenton, N. J.

BISMUTH SUBNITRATE AND CASTOR OIL FOR BURNS

The following treatment for burns, which terminated satisfactorily, would have been gladly received by the writer, years ago, had it been reported in a medical journal.

A woman, not very long ago, was lifting a kettle from the fire on a cook-stove, when a can containing half a pint of kerosene, which someone had carelessly set in the warming-oven of the range, tilted and fell into this open fire, and the flaming oil was thrown over her bare arms from the elbows down, over her clothing, and neck and face. There being snow on the ground around the house, the woman had the presence of mind to use it to quench the flames and thus save her life. She was within three weeks of full-term pregnancy, but the baby was born two days after the accident. (Incidentally, the latter lived, although it required much care to keep it breathing the first four hours. The day following, they employed a trained nurse.) The following treatment was instituted:

All burned surfaces were covered with sterile gauze wet with a saturated boric-acid solution containing sufficient picric acid to give it a definite yellow color. Blisters were opened and the dead skin was peeled off as rapidly as possible. When the granulations became rather painful, I happened to stumble on to the mixture of castor oil and bismuth subnitrate, combined in various proportions, from 1 dram to the ounce, applied with a lather-brush, to a paste thick enough to have to be spread with a spatula. Only one thickness of gauze was laid on the burned skin so as to enable fresh applications every few hours if the gauze hardened in the secretions, and this was covered with waxed paper or oilsilk. Twice a day the burned surfaces were exposed and the serum washed off with the solution of boric acid; then fresh bismuth paste was applied.

No ulceration or infection resulted in any part. The sloughing of tissue was very rapid where the burns penetrated the skin and into cellular tissues. No muscles or tendons were exposed by the sloughing of burned tissue. Very seldom did the gauze stick so fast to the granulations to make these bleed when it was removed. After twenty-five days—the time of this writing—the affected areas are entirely covered with new skin. The advance of new skin was very rapid, as much as half an inch in twenty-four hours after the granulations were ready for it. This was very much faster than I ever had seen under any other treatment. All indications, when large surfaces were sloughing out, were for a long siege of skin grafting.

The new skin does not now appear as if it would contract and disfigure the surface. This woman is 30 years old, medium fleshy, and of ordinary health. In all, nearly a square foot of skin over the stomach was badly burned, with an oval spot of about three by four inches in which the tissues sloughed out beneath the skin. The front of the neck, chin, and cheeks were badly blistered, but in only a few places were the deeper tissues penetrated.

The burns were deep in the folds between the vulva and the right thigh and caused about six square inches of both cuticles to be entirely destroyed. This was difficult to treat, on account of the lochia following confinement, with the danger of uterine sepsis.

Both arms were entirely stripped of skin, except the palms of the hand and between the fingers. In an area of about 20 square inches, in different patches, on the left arm and back

of hand the deeper tissues were penetrated. The amount of serum secreted here was annoying. The deeper the burned surface, the greater the proportion of bismuth to oil was used; that is, after granulation had started and the flow of serum was checked, being, for the last portions to heal, thick enough to be spread with a spatula. As the new skin formed, the bismuth covered it, and then was not disturbed till it scaled off spontaneously.

I believe much suffering can be avoided by using this dressing for granulating tissues, as it prevents adhering to the gauze and the time to heal over will be much shorter.

C. W. McFADDEN.

Moorhead, Ia.

EMETINE IN PELLAGRA

In the March number of *CLINICAL MEDICINE* (p. 265), I note an inquiry from Dr. A. D. Hilton, of Grannis, Ark., who has used emetine in the treatment of pellagra and wishes to hear from others who have employed the drug in cases of this kind.

During July, 1914, I treated a case of pellagra with emetine, the drug being given in this instance to control diarrhea. I was pleased, though surprised, to find that not only did it relieve the diarrhea, but also caused a disappearance of all the other symptoms of the disease. I am now watching this patient for any return of the symptoms. I will report my experience later.

More recently I tried emetine in a case of pellagra in its last stage, but in this instance without beneficial results.

C. R. MCKEE.

Sand Hill, Miss.

A CURE FOR LICE

Last night I was reading in the February issue of *CLINICAL MEDICINE* an article asking for a cure for lice. I don't know whether it was for head-lice or the oldfashioned "gray-backs" that the writer asked about, but I can tell him what to do for either.

About eleven years ago, I was on my way to Alaska to teach in the Government service, when an oldtimer there asked me whether I had brought anything to kill lice. Surprised, I answered, "No." Thereupon he told me to get some sabadilla powder and whenever I was bothered to sprinkle some of it in my clothes and bed. I got it. During that winter I must have gotten lousy fifty times, but each time a single application of

the powder was enough. I also used it on the natives and cleaned the lice off a good many of them.

Later on I was working on a steamer, where I came in contact with the native deckhands and got lousy again. I could not get a bath, so, I shook some of the powder inside my shirt and let it go at that. I was compelled to wear that shirt more than three weeks without washing it. During that time I did not have another louse on me, and when I got to a hotel in Seattle and got into a good bath there were no insects of any kind in my clothes.

Since then I have tried the same stuff on the natives north of Nome and found that it would remove the lice every time. I tried kerosene on the natives, but the sabbilla seemed to do better work. I hope this will be of value to some of the "family."

F. F. FELLOWS.

McMinnville, Ore.

IT IS "THE" JOURNAL

I have just received the February number of CLINIC MEDICINE. It certainly is *the* journal of clinical medicine, and it is not vain flattery to say that it improves with every number, since the present issue is a little the best I have yet had, and in a varied practice of some thirty odd years I have seen more or less of the periodical literature of our profession.

J. L. HENDERSON.

Osceola Mills, Penn.

FINANCIAL PROBLEMS

It is proverbial that physicians are poor financiers. They are excused for this failing, on the ground that they are so deeply interested in the scientific side of their profession and in the interests of their patients that they neglect their money affairs. The monetary proceeds to be derived from their labors are the real inducement for them to continue to serve the public; and, as they are doing a share of the world's work, they, like the laborer, are "worthy of their hire."

Modern business is highly systematized; without system, one would never get far in the business world. The successful merchant or manufacturer realizes that his net profits come in small figures in the percentage calculations, that most of their gross receipts represent cost and expenses. Physicians little realize this, and most of them do not keep a

complete set of books and have but a very vague idea about their expenses and losses. Besides his books of accounts, every good business man keeps a record of the total amount of business transacted and total collections and expenditures. He knows the exact amount of his gross and his net income. Without this information, he is not in condition to improve his finances.

The following figures, from the books of a general practitioner for 1914, illustrate this point: His annual business amounted to \$3454.75; collections, including those from old accounts, \$2407.25; expenses, \$1367.42; net proceeds, \$1039.83. Expenses divided as follows: Drugs, \$323.15; general (including rent for office, light, fuel, electric power, telephone, books, literature, society dues, and such like), \$425.45; automobile upkeep, \$450.92. (He keeps two cars, an old 5-passenger one, that averaged 19 cents per mile to operate, and a new, light roadster, that cost 4 1-3 cents per mile for the year.) Team and buggy cost for year, \$166.90. (The team was in the pasture about half the year.) His total business fell about \$300.00 short of the previous year; which likely tells us that he is making fewer calls to carry a patient through an illness than formerly, because of probably using the telephone more. His office charges are from 50 cents to \$1.00, including medicine. (This is too low; he should be getting from \$1.00 to \$2.00.)

The most noticeable thing is, the difference between the total business done and total cash receipts. He is a poor collector. He has made about 6000 miles over country roads; and these often were bad, and there was much bad weather and night drives. He should be booking over \$4000.00 and collecting \$1000.00 more than his books show, without increasing expenses. He cannot keep up this amount of work for more than a few years longer, and especially not without being well waited upon. His expense account shows very little paid out for labor. He cannot reduce those expenses very much. They rather will increase, unless his business falls off, except that he could confine himself to using the light car. The net proceeds are much too small and the old doctor is of the opinion that he was more prosperous twenty years ago, when his yearly practice was a little over \$2000.00 and kept only a team of horses and had a cheap poorly furnished office; then his net income would purchase about twice as much as at present.

Medical fees have advanced some, but not nearly as much as has the cost of living.

This particular doctor probably is as well off as the average general practitioner. Every physician should work these problems out for himself and adapt himself to present conditions; and a complete set of books carefully kept is the first step in the right direction.

M. F. MINTHROW.

Castana, Ia.

[Read the editorial on "The Doctor's Ammunition" and Mr. Gifford's article, "Why So Many Doctors Fail," both in this issue. We are anxious to deal seriously, and concretely, with the money problem in this journal, and ask your earnest thought and cooperation.—Ed.]

CALCIUM SULPHIDE: WILL IT CURE THE MORPHINE-HABIT?

In November last, Dr. J. H. Johnson, of Nashville (Tenn.), in a personal note, wrote us as follows:

"About six weeks ago, a man came into my office, and for a simple ailment from which he was suffering I prescribed calcium sulphide. Three days later, the man called again, to tell me that he had been in the habit of taking 1 grain of morphine every day, but since taking the remedy I had given him he had lost all desire for the narcotic drug. What do you know about this?"

Upon receipt of this letter, we wrote to Doctor Johnson for more details and for a description of any further experience he might have in this particular. In reply we received the following letter:

"I am not yet ready to make a full report regarding the use of calcium sulphide in the treatment of morphinism. Thus far I have treated only two patients, both taking about 1 grain of morphine daily. Under calcium sulphide, both report the disappearance of the desire for the drug, this lasting until the fourth day.

"About this time, they complain of the appearance of a heavy aching feeling in the legs and of considerable restlessness. To relieve this condition, I have added to the calcium-sulphide treatment the use of potassium bromide. This seems to help, and my patients are getting along much better. One of these patients is 36 years of age and the other is 60 years old.

"Thus far, I have given only small doses of the calcium sulphide—never more than 4 grains in any one day. I am almost persuaded that this drug will prove a real cure

for this awful habit, to which so many of our people are slaves.

"I have heard of a woman in this vicinity using 30 grains of morphine daily. I shall try to persuade her to let me treat her. Her case should prove a very thorough test as to the efficiency or nonefficiency of this remedy. I shall continue my experiments and report to you again soon."

This report, while it is brief and as yet not complete, certainly is most suggestive. Possibly other readers of *CLINICAL MEDICINE* have tried calcium sulphide in morphinism. If so, we hope they will let us know what results, if any, they have secured with this remedy.

One suggestion we would make, and that is, that whatever method of treatment is employed, the most thorough elimination through the skin and clearing out of the bowels is absolutely essential. The restlessness of which Doctor Johnson's patients complain is a common symptom during the stage of deprivation and is one evidence of the excessive toxemia from which all these patients suffer. They must be cleaned out thoroughly—every one of them.

THE REMSEN BOARD

I have read with a great deal of interest Doctor Fairbanks' article in the October, 1914, number of *CLINICAL MEDICINE* under the caption "Acidity and Food Poisons," and I wish to observe that, so far as any authoritative dictum emanating from the so-called Remsen board relative to the composition or wholesomeness of baking powders or any other article that is injected into our foodstuffs is concerned, I believe that the consensus of opinion among intelligent people will sustain the views of Doctor Wiley, the opinions of the Remsen board to the contrary notwithstanding; and that they will prevail long after the Remsen board has passed into "innocuous desuetude."

The opinion seems quite general among well-informed and unbiased people that the Remsen board is not far enough removed from the questionable influence of mercenary corporations and manufacturers of factitious eatables and drinkables to officiate as reliable, disinterested public governmental censors of the quality of our foodstuffs.

GEORGE D. STANTON.

Stonington, Conn.

[We cannot agree with Doctor Stanton with regard to the character of the member-

ship of the Remsen board. It would be hard to select a body of men of higher standing than Chittenden of Yale, Remsen of Johns Hopkins, Long of Northwestern, and Herter of Columbia. It is not to be believed that men like these can be influenced in the slightest degree by "mercenary corporations and manufacturers of factitious eatables."—Ed.]

MAKE A CENSUS OF THE DRUG ADDICTS IN YOUR TOWN

Here is something very important. In order to arrive at an accurate estimate of the problem of the drug addict, it is essential that we should know how many of these people there are. Thus far we have only estimates—guesses—based upon insufficient information.

As a basis for judgment we should have a census of these individuals in as many towns as possible; and these towns should represent all parts of the country. We therefore urge readers of *CLINICAL MEDICINE* to undertake such a census in their several towns, working in connection with other physicians and with the local druggists. The information secured should be of an absolutely confidential nature, and all "repeaters" should be excluded. I wish we might hear from at least one representative town in every state. Please undertake it in yours, and report.

APPENDICITIS: "A BEAUTIFUL CASE"

I beg to be allowed space in your journal to demonstrate a "beautiful case" of acute appendicitis which has just come under my care.

A strong, robust country girl, 14 years of age, living nine miles out in the country, went to school as usual last Monday and that evening at supper ate some cucumbers. During the evening and night she complained of pains in her abdomen, and she slept little. Next day she remained in the house and vomited several times. Her parents made hot applications all day Tuesday, and gave her some patent medicine tablets and pills to move the bowels, but no passage took place.

At 1:00 a. m., Wednesday, I was phoned for and reached the girl's bedside at 2:30 a. m. What did I find? Her temperature was 101° F. Pulse 120 and of a dicrotic character. Respirations, 20. Deep palpation over McBurney's point showed distinct tenderness, al-

though she said the chief tender spot was in the epigastrium.

No previous history of pain in the abdomen. No cough, chest clear, tongue clean. Her menses began when she was twelve years of age, and have been regular since then, the last time being a fortnight ago.

The girl's parents were immediately advised to have an appendectomy done just as soon as she could be got to a hospital, some forty miles away, and she was taken in my automobile, slowly, along the nine miles to the train. From the moment I saw her I ordered that no water, food or medicines should be given, but I placed an ice bag directly over the right iliac region and this gave great relief from pain. The Fowler position was adhered to—a semi-erect posture—and no cot or stretcher allowed and I had her sit up in the railway coach to travel to the hospital.

Her temperature went down to 99.8° F. eight hours after I first saw her, when it was, as I have said, 101° F. Her pain was now slight, and judging from this reduction in temperature, one would be inclined to think things were clearing up nicely; but that is just where a mistake would be made, for a lessening of pain and a fall in temperature with the pulse still at the same rapid rate, that is, 120, all indicate gangrene.

The operation took place immediately on arrival at the hospital—within forty hours of the first symptoms—and the following report from the surgeon speaks for itself:

"The patient was immediately put on the table. Her appendix was long and gangrenous, extended down through the pelvis and was on the verge of rupture. It was a mighty angry-looking organ and was not removed one moment too soon. Another ten or twelve hours would have developed a different story. The mucous membrane was entirely necrotic from base to apex, the walls very much infiltrated and red, but there was no evidence of perforation. The pelvic cavity was filled with bloody serum, indicating that there had been considerable reaction as a result of the migration through the wall of the appendix. We introduced drainage and she is now in a Fowler position and we shall anxiously await developments. However, I feel that unless some unforeseen complication develops she will recover."

This case is another reminder to us all that there is no medical treatment for appendicitis. If you diagnose a case as one of appendicitis, our duty is to have that appendix out inside of the first forty-eight hours of the attack. If the patient is not put on the table

during the first forty-eight hours, then wait until the fifth day or a little longer to allow walling-off to occur and then open the abdomen and let out the pus, i. e., treat the case as one of abscess; later, remove the appendix. It is after the first forty-eight hours that Ochsner's starvation treatment is advocated, while waiting for this walling-off treatment. But Ochsner, himself, says that the appendix should be removed every time inside the first forty-eight hours, if possible.

R. HESLOP-PAYNE.

Tripp, S. Dak.

[It is indeed, a "beautiful" case. However, I hardly think our readers will agree with Dr. Heslop-Payne in drawing such a general conclusion from even so instructive a case. I fancy many will have experiences to relate in which appendicitis *was* successfully treated by medical measures, or, at least, without resort to the knife. Not all cases of appendicitis by any means, are suppurative; and in these days of refined clinical diagnosis it is really not such a difficult matter to differentiate between a simple and a suppurative case, even though there be no decisive physical symptoms. The blood examination will usually tell the story with pretty uniform reliability.

If the infection and the inflammation be of a simple character, medical treatment is, according to the experience of many physicians, quite justifiable. Prompt eliminative and antiphlogistic medication usually proves effective. If the patient is seen at the beginning of the attack, an ounce of castor oil or other quickly acting purge will serve to clear the intestinal tract effectually. At the time when the oil should operate, it is well to give a high enema of decinormal salt solution, with the patient in the lateral-prone position, hips elevated.

The patient should be given no food for twenty-four hours, at least, and then only the most easily assimilated fluid diet in small quantities for several days. The pain may be relieved and the spasm relaxed by means of the antispasmodic combination of glonoine, hyoscyamine and strychnine arsenate. Morphine, with strychnine or hyoscyne may be used in severe cases, but is best avoided. The temperature is controlled with aconitine or the defervescent compound, together with plenty of pure water to drink. Compresses wrung out of a hot solution of epsom salt, one ounce to the quart, applied over the appendical region, will also help materially in reducing congestion and spasm. The value of a coli-bacterin should not be forgotten; also of

nuclein, given hypodermically, to increase the resistance. This latter remedy should be given in all cases as a routine, whether treated medically or surgically.

However, if there is the slightest evidence of pus formation, as shown by the blood picture and the clinical symptoms, then the patient should be operated upon at once, as advised by Doctor Heslop-Payne. In case of doubt, tie to a competent surgeon and let him decide. Take no chances.—Ed.]

"I KNEW IT, BUT DIDN'T THINK": THE CASE OF ECHINACEA

I want to say that I have read Doctor Ellingwood's article about echinacea, in the December issue of *CLINICAL MEDICINE*, with unusual interest, the more so, since echinacea has been a hobby of mine for more than six years. In fact, I catch myself using it for nearly everything, without much reason for it, sometimes, except that I never in my life made use of it that it did not give me marked betterment, regardless of the disease or the condition.

When I attended college, Professor Waterhouse one day was giving a quiz on belladonna. My seat-mate (now Doctor Van Horne Goessling, of St. Louis), when I had answered a question that he had missed, whispered to me, "I knew that as well as you, but did not think." That expression made a lasting impression upon my mind.

I cannot say as much about Doctor Ellingwood's article. I thought I knew a lot about this echinacea, but this article in the *CLINIC* rubbed up the old ideas to me, besides presenting lots of new ones. One of these worth-while ideas was that the dose should be often repeated. Another marked idea advanced was, that the remedy is positively a corrective of depraved and perverted body-fluids. For this latter reason alone, I deduce the following conclusions that, to my mind, account for the universal good I have always obtained from its administration. I think I should be justified in saying that "the body is as well as are the fluids therein." If we keep the fluids well, the body will be well. The blood is the body-carrier for all repair and elimination—that is what I mean to express.

I am not writing this to place emphasis on Doctor Ellingwood's article, but to tell a story on myself, another case of "I knew it, but did not think."

While on a recent tour through Central America, I stopped for five weeks at La Ceiba,

on the north coast of Honduras, a town of about 7000 population. The town recently had suffered severely by fire. The entire business part was burned down, including all the hotels, consequently our party had to rough it as best we could. I bought a cot and mosquito-netting, and rented a small room having a sheet-iron roof but no ceiling. It was comfortable in the room at night after 10 o'clock, but uninhabitable in the daytime; it felt as if bread could have been baked in it during the day.

Most of the overground cisterns were destroyed, so that water was very scarce, there being no mountain-water supply. If you ate or drank anything, you got more or less "pump-water," obtained by driving a pipe down in the sand about 8 feet and attaching a pitcher-pump to it. The natives know very little about sanitation, and care less, regardless of pretty rigid laws on the subject. They regard it as white man's "foolery." During the fourth week of my stay, I began fevering. If you have never seen a case of tropical fever, you hardly will know how to sympathize with the victim. The fact is, though, one is not really very sick. The best way of putting it is to say that you are just "knocked out."

The symptoms are about as follows: Slight fever every evening; goes off about midnight, if you get a good sleep. Bowels inactive, on account of absence of bile secretions. Dull soreness in the liver. Constant dull headache if bowels are not kept active, caused by absorbed toxins. Constant desire to sleep when bowels are inactive, owing to the toxemia. It is best not to allow yourself to sleep too much; some exercise is of much benefit. The blood or urine contains very little, if any, bile, and bile seems not to be secreted, consequently none can be excreted into the intestines. The skin becomes dirty, but not yellow, resulting more from pigmentation. Liverspots appear on the face, and there is an eruption of a vesicular nature over the body about the size of chicken-pox, but not so numerous; usually two or three on the chest. These vesicles run a course of about thirty days and leave little scars. I suffered worse with urticaria than from any other symptom. The tongue usually is clean only at the base.

Now to the point: Tropical fever is dependent upon blood perversion, and is not a malaria—that is my opinion.

As to treatment, I took almost everything that we all naturally would think of to stimulate the liver and bowels, from chionan-

thus on down the line. As long as the alimentary canal was open and active, I felt very well, but upon the withdrawal of the purgatives the symptoms would return in two days.

Immediately upon reading Doctor Ellingwood's article, a new light dawned on me regarding my sickness. The "hod-carriers" that I pressed into service only removed debris, but they did not rebuild. I said to my wife: "I have been acting the fool, when I should have had better sense. I am going to take echinacea, and get well."

Beginning to take 2 drams in four doses per day, recovery proceeded nicely from the first dose. It has been one week now, and I am using no purgatives at all. Bowels move, tongue is clean, and I feel as if I could jump the fence. Echinacea will cure me in three more weeks—sure!

T. H. STANDLEE.

Edgewood, Tex.

[And here's hoping it did!—ED.]

COMMON MISTAKES PHYSICIANS MAKE: ALSO, A FEW SUGGESTIONS

1. Prescribing castor-oil or epsom salt for a physic, and then sending the patient to the grocery-store to get it.

2. Putting up liquids in 8-ounce bottles and directing patients to take a teaspoonful every three or four hours. On January 7, the writer found in a house, two 8-ounce bottles for one patient. The direction on one was, to take a teaspoonful every three hours, on the other it was, to take a teaspoonful every four hours. A hint to the wise is sufficient.

3. If you charge \$10.00 for a confinement-case in town, why not charge that plus mileage out in the country? That's right, fair, and reasonable. Let's all do it. Whatever your charge is in town, add mileage on trips into the country.

4. The writer recently had reasons and the opportunity to knock a competitor hard—he didn't do it, though.

5. A certain physician has the following displayed in his office in big letters:

My charges will depend upon:

1. Condition of the patient.
2. Distance to patient.
3. Whether day or night trip.
4. Kind of drugs used.
5. Weather and roads.

6. Day visits in small towns and villages should be \$1.50; night visits, \$2.00. Do you charge as much? If not, why not?

7. If it were not for selfishness among physicians, there would be more team-work (partnerships).

8. It is not necessary to patronize saloons or to loaf in them for friendship, nor is it business; still, some physicians do this very thing.

9. Do not prescribe peroxide of hydrogen, nor should you wrap your medicines in pages torn from medical journals.

10. Why don't you physicians write something of interest for your medical journals? You have splendid ideas on some subjects that would greatly interest and benefit the rest of us. Come on, now; don't be selfish. If you have something good, pass it on.

"KIRK."

FETAL POSITIONS DESCRIBED

Referring to my article entitled, "Three Cases of Transverse Presentations" (p. 183, March issue), I was surprised to read toward its close: "Some textbooks state that the dorso-posterior positions are easier to deal with, but I certainly have not found them so."

This is exactly what I did not say, but what I claim the textbooks ought to say. I have before me a leading textbook on obstetrics (latest edition) which maintains that the dorsoanterior positions are more common and are easier to deal with; further on the author declares that the dorso-posterior positions are rarer and much more difficult to deal with.

Even if I run the risk of appearing pedagogic, I will say that we have four positions in which we may find the child in the uterus in transverse presentations: either the back or the belly of the child will face the operator, and, furthermore, the head of the child may be found on either side of the mother.

This is not very technical; on the contrary, it seems easier "than falling off a log," so that even the general practitioner (poor imbecile!) ought to be able to grasp it.

The rudiments of Latin teach us that *dorsum* means the back of either man or animal, and that *laevus* means left and *dexter* means right. Thus, when we have head to left and back anterior, we call it scapulolævo-anterior (Sc. L. A.); the scapula being selected as the point of direction, because in transverse presentations the shoulder is generally the part that presents first. So,

transverse presentations amount to about the same thing as shoulder-presentations, although, in rare cases, other parts might present first.

Head to right, back, anterior is called scapulodextro-anterior (Sc. D. A.).

Head to right, back, posterior is, scapulodextro-posterior (Sc. D. P.).

Head to left, back, posterior is, scapulolævo-posterior (Sc. L. P.).

It does not follow that the long axis of the child always crosses the long axis of the mother at a right angle; there are intermediate, or oblique, positions, and these no doubt are the more common.

But here, Mr. Editor, comes the point and the explanation: The child is folded upon itself like a jackknife—chin on sternum, arms crossed over the chest, legs crossed over the belly. Now, does it not stand to reason, if these feet and arms face you (which is the case in dorso-posterior positions), that it will be easier for the operator to bring down a foot or change the position to a head-presentation? And, on the other hand, if the back of the child is toward the operator and the feet and arms are toward the mother's spine or sacrum (which is the case in dorsoanterior positions), will it not be much more difficult to get a hold of a leg, or to change the polarity? I certainly have found it so.

H. G. HENRIKSEN.

New Market, Minn.

WANTED: URINE FROM VICTIMS OF PHOTOGRAPHERS' DERMATITIS

Will you kindly publish this announcement, so that I may reach as many cases as possible?

The subject of chemical dermatitis has never been adequately investigated. I have, in a few cases, seen some interesting results that would seem to point to the possibility of preventing poisoning by photographic chemicals. It is necessary to secure a large series of cases to work out the points, and I should, accordingly, be grateful if every reader of THE AMERICAN JOURNAL OF CLINICAL MEDICINE who has ever had dermatitis from metol, duratol, or any other photographic developer or chemical would please send me his name and address.

My friend, Mr. Frank R. Fraprie, editor of *American Photography* and *Popular Photography*, has consented to assist me in securing the cases by publishing an editorial appeal in his two magazines.

The idea on which I am working is, that susceptibility to skin irritants of the photo-

graphic chemicals is not constant, but varies with the acidity of the urine; in other words, only acidemic individuals seem to get poisoned.

For instance, I have twice been poisoned by duratol while I was acidemic; but a long period of complete immunity intervened, during which the urinary acidity was normal and elimination in other respects was good. Whether this idea will "hold water" when, say, a hundred cases are examined and treated, remains to be seen.

Another curious thing which needs study is the fact that persons susceptible to a given developer seldom seem to be affected by any other.

Our idea is, to send out history-blanks and mailing-cases, the latter for specimens of urine, to be tested for total acidity to phenolphthalein (or to mail test-outfits to distant points).

If a large percentage of the cases prove to be acidemic, we intend to institute sodoxylin treatment, then secure further samples of urine.

If removal (or correction) of acidemia is the thing needed to prevent chemical dermatitis, the establishing of that fact will be of the utmost value to the profession, as these cases are becoming more frequent with every year.

MALCOLM DEAN MILLER.

Wollaston, Mass.

INJECTION TREATMENT OF HEMORRHOIDS

In the February issue of *CLINICAL MEDICINE*, page 160, I observe an article by Sir James F. Goodhart, taken from *The London Practitioner*, regarding the hypodermic treatment of hemorrhoids.

Since the year 1877, I have used no other method in any case of hemorrhoids, and have had perfect success in every instance, and, what is better, none of the patients had to go to the hospital, but all kept on attending to their daily duties while under my treatment. It takes from six to twelve weeks, according to the severity of the condition, to complete a cure.

I quite agree with Doctor Goodhart that there is entirely too great a desire in this country to use the knife, and hundreds of pile-patients could be cured by the proper use of medicine, while the result would be far better for them. A knife should never be applied to hemorrhoids if the best results are expected; for, very often the surgeon

does not get all the tumors, while frequently the cutting results in the formation of a fistula, which is as bad as the original trouble, or worse.

The same rule holds good in cancerous and malignant tumors, for all of which I have employed the hypodermic treatment for the last twenty-two years, and have a record of over 80 percent of cures, where I am positive from past experience and observation that the knife would have failed. However, lots of tumors are cut off that are claimed to be malignant, when, as a matter of fact, there is not the least semblance of malignancy about them.

The knife will not cure a malignant growth of very long standing, and we seldom get hold of them until they are well advanced. The hypodermic injection nearly always will effect a cure, especially when no vital organ is involved.

Goiter can be eradicated by the use of medicine in most cases, and appendicitis can be relieved by proper treatment in 99 cases out of every 100. Appendectomy now is simply a fad, and I believe that in ten years from now it will arouse disgust when operation is suggested.

Fulton, Ill.

G. W. CLENDENIN.

[Doctor, you should give us the details of the methods you employ. The nonsurgical treatment of goiter and appendicitis, the injection treatment of hemorrhoids, and any method of treating malignant growths successfully are matters of intense interest to all of us. Give us all the help you can.—ED.]

ANOTHER EXCHANGE OFFER

Dr. C. Lawson Johnson, of Ripley, Tenn., offers to exchange his formula for the home treatment of morphinism which "gives 100 percent of complete cures, with practically no withdrawal symptoms," for any other formulas or suggestions of practical value to the general practitioner. What have you to "swap" with Doctor Johnson?

We have suggested to the Doctor that the best way and place to exchange helpful therapeutic ideas is through the pages of *CLINICAL MEDICINE*. If you have something good, tell us all—and tell all the details—and ask the other fellow to come back with his favorite therapeutic expedient. By doing this, we shall all benefit. Let us make the columns of *CLINICAL MEDICINE* a free forum for universal helpfulness.

What do you say—everybody?

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by *GEORGE F. BUTLER, A. M., M. D.*

CHLOROSIS is an expression of many different constitutional conditions. In some instances, it is a symptom or serious complication, rather than a disease by itself, although it needs treatment as much as does the disease which it complicates and aggravates. It is far from exceptional to find it associated with the degenerative constitutions, with all their expressions, including as Virchow has pointed out, the arrested development of the circulatory, hematogenous, and reproductive organs.

It is too often forgotten, in this connection, that the child is not an undeveloped man, but that the man is an imperfectly developed child. The child, as Havelock Ellis remarks, with its relatively enormous head, its large, protuberant abdomen, its small chest, short, feeble legs, comparatively vigorous arms, smooth almost hairless skin, large liver, kidneys, thymus, and adrenals, presents an anatomic picture distinct from that of the adult. The differences are such as imply a greater blood-making as well as greater eliminative power.

The liver, which practically is two organs (judged from its origin in the embryo), exerts, from the beginning, as Minot has shown, a sanguifactive and a poison-destroying function. As it appears before the heart, it obviously plays a role in the proper development of the circulatory system.

It is not astonishing, therefore, to find, as Sir Andrew Clark has pointed out, that stercoremia plays a large part in the development of chlorosis. The fact that chlorosis is most frequent in women does not militate against this opinion of Clark, as Osler seems to think. Women are most likely to be affected by stercoremia, since in them circulatory perturbations are most frequent, in consequence of menstrual phenomena, and they also are most affected by autointoxications.

W. A. Hammond believes chlorosis to be a disease of the nervous system, and, when morbid changes take place in the blood, during

its continuance, they are always secondary and directly the consequences of nervous derangement; and, therefore, they are nothing more than accompaniments of the chlorotic condition.

Chlorosis frequently runs its course without any symptoms of pathologic change in the blood being manifested. Luzet has said that hysteria and chlorosis are sisters. Stieda claims that in chlorosis there are signs of general ill development, and that in particular there is imperfect development of the breasts and genitalia, with a tendency to contracted pelvis. According to Lloyd Jones, chlorosis is but an exaggeration of a condition normal at puberty, and in many women at each menstrual period. In his opinion, chlorosis is the extreme pathologic element in preparation for motherhood. The elements entering into the preparation for motherhood involve both increased need of extra nutriment and decreased elimination. The hepatic and renal functions are taxed coincident with the increased hematogenic demand.

The conditions thus produced resemble those found in cyanosis arising from toxic products resorbed from the intestine. Here, Vander den Berg and Grytterink have found two sets of changes in the blood—sulphohemoglobin and methemoglobin. These changes are due to reduction of hemoglobin by nitrates. Chlorosis, despite the contrary opinion of Osler, sometimes, although infrequently, occurs among males. This fact was obvious even in the time of Shakespeare, who makes Falstaff remark ("Henry IV.," part II, act IV, sc. 3): "There is never any of these demure boys come to any proof; for thin drink doth so overcool their blood and making many fish meals, that they fall into a kind of male green-sickness." In "Antony and Cleopatra" he remarks: "Lepidus, since Pompey's feast, as Menas says, is troubled with the green-sickness." Observations of the preadolescent stage of hebephrenia indicate that a by no means small proportion of neuropathic boys are, like neuropathic girls, troubled with chlorosis. The chlorotic state of pretubercu-

losis is free from sex limitation. While this condition differs somewhat from pure chlorosis, it resembles it in many of its features.

The following leading symptoms, according to A. Sokolowski, demand consideration:

The pale aspect of the skin is one of the most important symptoms, since it misleads acquaintances and not infrequently leads the physician to the erroneous diagnosis of chlorosis. This pallor, however, often, but not always, is distinguishable from that of chlorosis. In aggravated cases of chlorosis, this paleness assumes a waxy hue shading into greenish, while in the milder cases all gradations of this color are exhibited.

On the other hand, the skin in pseudochlorosis has a bluish-gray, shading sometimes into an ashen hue. The same may be said of mucous membranes. The gums and mucous lining of the cheeks never exhibit such a high degree of pallor in pseudochlorosis as is almost typically characteristic of ordinary chlorosis. General lassitude, dyspnea on ascending stairs, and frequent palpitation of the heart are some of the most common and constant concomitants of the more advanced stages of ordinary chlorosis. Some subjective symptoms of pseudochlorosis appear at an earlier date and are of less intensity. Chlorotic persons are easily fatigued, especially when extra physical exertion is demanded, such as climbing stairs; girls, however, affected by pseudochlorosis become fatigued upon the slightest exertion, while dyspnea may supervene during perfect quiet.

Digestive disorders are constantly met with in both. A most constant symptom in pseudochlorosis is persistent lack of appetite lasting for weeks or even months. This also happens in true chlorosis. Here, perverted appetite more often exists, the loss of appetite giving way to bulimia, an unreasonable desire for unusual food, which rarely occurs in pseudochlorosis. Among other examples of deranged digestion in both is obstinate constipation. Vomiting is rare and usually ascribable to spells of severe dry-coughing.

Emaciation is the most constant typical phenomenon of pseudochlorosis. This is progressive and constitutes an important diagnostic mark distinguishing it from true chlorosis; the patients afflicted with the latter trouble often losing little or nothing in weight, in spite of their disordered digestion.

Menstrual disorders are symptoms of pseudochlorosis. As a rule, the catamenia are scanty and pale in color and become entirely

suppressed only when the symptoms of tuberculosis have become pronounced or are considerably advanced. In chlorosis, on the other hand, the menses are completed but seldom, while they may disappear entirely for a protracted period.

With respect to the circulatory system, well-known murmurs of the heart and jugular veins make their appearance in the course of chlorosis. These may occur in pseudochlorosis, but they are very rare and not of the same intensity. A much more constant symptom in the course of pseudochlorosis is a considerable acceleration of the pulse, attended by exacerbation, toward evening, of the fever, which appears in the earliest stages. These varying attacks of fever recurring every evening sometimes last for months and frequently are the cause of continually progressing emaciation.

In every form of obstinate chlorosis, it is of utmost importance to take the temperature, since the thermometer may throw light on the nature of the disease even in its earliest stages. Fever exceptionally accompanies true chlorosis. This however is rare. Molliere, in 1882, described it for the first time under the name of *chlorose febrile*. Hayem hardly is justified, however, in claiming that these fevers must be referred to certain complications not at all allied to chlorosis. The fever solely referable to pure chlorosis is almost continuous, but may occasionally be aggravated during the morning hours. The rises in temperature sometimes occur in pseudochlorosis, during the earliest stages, at a period when physical changes in the lungs are not demonstrable. After such changes have undoubtedly taken place, the fever assumes a continuous hectic character.

Cough generally constitutes a symptom of pseudochlorosis. In the beginning, it is but light, short, and dry, and principally occurs during the evening, but it may make its appearance at night. In the same measure, however, as the disease progresses, the cough grows more constant, with sometimes, in severe cases, more or less bloody expectorations. Sokolowski has seen cases in which cough was completely absent, while the lobes were distinctly affected. Commonly the expectoration is absent, setting in only when the physical signs of parenchymatous induration become prominent. Then the tubercle bacilli and elastic fibers can readily be demonstrated. A short, dry cough frequently occurs in the progress of chlorosis, but principally during the daytime, never in the evening, much less at night. It not infrequently is a reflex symp-

tom originating in the fauces or nose, from granulations, faucial hyperesthesia, muscle hypertrophy, and so forth, and sometimes is a neurotic mimicry of a real disorder.

In regard to the hematology of chlorosis, Osler remarks: "The drop, as expressed, looks pale. Johann Duncan, in 1867, first called attention to the fact that the essential feature was not a great reduction in the number of the corpuscles, but a quantitative change in the hemoglobin. The corpuscles themselves look pale. In 63 consecutive cases examined at my clinic by Thayer, the average number per cubic millimeter of the red blood-corpuscles was 4,096,544, or over 80 percent. There may, however, be well-marked actual anemia. The lowest blood-count in the series of cases referred to above was 1,932,000. There may be all the physical characteristics and symptoms of a profound anemia, with the number of the blood-corpuscles nearly at the normal standard. Thus, in one instance, the globular richness was over 85 percent, with the hemoglobin about 35. No other form of anemia presents this feature with the same constancy and in the same degree.

"The importance of the reduction of the hemoglobin depends upon the fact that it is the iron-containing elements of the blood, with which in respiration the oxygen enters into combination. This marked diminution in the iron has also been determined by chemical analysis of the blood.

"The microscopic characteristics of the blood are as follows: In severe cases the corpuscles may be extremely irregular in size and shape—poikilocytosis which may occasionally be as marked as in some cases of pernicious anemia. The large forms of blood-cells are not as common, and the average size is stated to be below normal. The color of the corpuscles is noticeably pale, and the deficiency may be seen either in individual corpuscles or in the blood mixture prepared for counting. Nucleated red corpuscles are not very uncommon, and may vary greatly in numbers in the same case at different periods. The leukocytes may show a slight increase; the average in the 63 cases above referred to was 8467 per cubic millimeter."

Going down to the fundamentals of medicine and psychotherapy, we find that both

of them really rest upon the same foundations. Herbert Winthrop Ilsley, founder of the Ilsley School of Philosophy, writes as follows:

"There are many methods of mental healing, all of them based on the same truths, but each is applied according to the intelligence of the healer. The base upon which my system of psychotherapy rests may be indicated by these words of Emerson: 'The universe is the externalization of the soul. . . . Since everything in nature answers to a moral power, if any phenomenon remains brute and dark, it is because the corresponding faculty in the observer is not yet active. If I am sick or troubled, it is because some faculty within me is not active, not in its normal state; and it follows that, if I wish to be well, I must learn what this sluggish faculty is and give it action if I can. The case is comparable with that of the boy at school. If he fails as a scholar, it is because of too little activity in one or more of his studies. We examine his rank or his work in each study until we arrive at the one that is holding him back, and upon this we direct him to concentrate his efforts until he has gained complete scholastic health.' This indicates, perhaps faintly, the reason and methods at the roots of psychotherapy as I practice and teach the subject."

Now, these are just the reasons and the method at the roots of medicine. We seek for the inactive something in the patient and then attempt to start it going correctly—only, while formerly it was always some thing that we sought, some tissue or organ, now it very often is some faculty that we seek, just as with psychotherapy. For, behind every physical appearance, good or bad, we now know there lies, as its cause, some thought or faculty of the mind. In the words of Doctor Moore:

"Not a thought, not an idea, not an act of will, not an affection or a feeling of the mind can be excited without positive change in the brain and thence in the blood and secretions; for every variation in the state of the whole or of any portion of the nervous system is, of course, accompanied by a corresponding change in those organs and functions which it furnishes with energy; so that the mind and body are in a constant course of action and reaction on each other as life and consciousness continue."



Among the Books

"JOHN B. MURPHY'S CLINICS"

The Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. December, 1914. Published bimonthly by The W. B. Saunders Company. Price, per year, \$8.00.

Several years ago this reviewer had the fortune to be on terms of intimate friendship with a man who even then was achieving an enviable reputation as a diagnostician and internist, and who since then has "arrived" with international distinction. Early in their acquaintance, the reviewer asked this gentleman the privilege of inspecting his library, whereupon the diagnostician smiled a little enigmatically and led him into a bare room lined with plain deal shelves, and these packed to the guards with unbound pamphlets. The reviewer gazed rather blankly around, then unfeignedly looked his interrogation. "Reprints," said the great man, in his short, snappy way. "The only kind of literature worth a damn. [Yes, kind reader, he said it exactly like that.] These are all reports of actual cases. What textbooks or treatises can compare with that?"

A little exaggerated, of course; he didn't mean it in all its exclusiveness; but, it got his meaning across. Live, current matter, the concrete reports of real, actual, clinical cases—and these, after all, are the stuff out of which the flux of medical progress is made. And this is what one gets in these "Clinics" emanating from Mercy Hospital, fresh from the experience of one of the greatest living clinicians. Nuff sed!

BARNES: "THE TONSILS"

The Tonsils, Faucial, Lingual, and Pharyngeal; With Some Account of the Posterior and Lateral Pharyngeal Nodules. By Harry A. Barnes, M. D., Illustrated. St. Louis: The C. V. Mosby Company. 1914. Price \$3.00.

It might seem at first blush that so much has been said and written in the past few years concerning the tonsils as to make a book devoted to them rather a work of supererogation, not to say superfluity. A little further consideration, however, will suggest that this

very fact renders it necessary to have provided a decisive, authoritative book on the subject, one that will serve as a sort of clearing house for the mass of information (and misinformation), experience, and opinion that has flooded medical literature during the last ten years or so. Let us have it all collated, winnowed, separated, and evaluated, and thus let us learn just where we stand with relation to the pathologic and the sound tonsil.

Very well, here is the very book needed. Unquestionably, Doctor Barnes, instructor in laryngology at the Harvard Medical School, has had the cooperation and advice, if not the actual assistance, of very high authorities in its preparation, of men such as Minot and Warren and Coolidge; indeed, to these three he makes specific acknowledgment in his preface.

The entire work bears the marks of thorough, patient, painstaking, discriminative labor. It is no hurried, half-cocked effort. It is plainly an earnest, conscientious attempt to restore the tonsil to its real status in physiology, pathology, and therapeutics, backed by extensive observation, wide reading, and, as intimated, by personal conference with men recognized as authorities. The more strictly scientific parts of the book are written with a view to emphasizing their practical application to clinical work; this, of course, taking nothing from their value to the man in the field.

GREENE: "PHARMACOLOGY"

Handbook of Pharmacology. By Charles Wilson Greene, A. M., Ph. D. With 70 illustrations, many new and in colors. New York: William Wood & Co. 1914. Price \$3.50.

The evolution of the conception of disease as a dynamic interplay of action and reaction between objective and subjective forces, a disturbed phase of the physiologic system of dynamic adjustment between the body and its environment, naturally has been attended by a corresponding evolution of the conception of therapeutics. We are no longer so intensely concerned about what a given drug does to the sick man, but rather what the man

does in the presence of the drug; we no longer seek the action of a remedy, but its reaction; we no longer give it for its mass-action, but for its dynamic effect.

This new principle of therapeutics has changed our therapeutic valuation of drugs, and consequently our method of investigating and standardizing them; thus giving rise to a modern science of pharmacology, based largely upon animal-experimentation. So it is that nothing short of a thorough understanding of the actual, dynamic reaction of our medicinal agents will satisfy the modern physician for meeting the therapeutic situation adequately.

In pursuance of this requirement, medical schools of repute are establishing courses in pharmacology, and there is growing up a pharmacological literature. To this literature, this book by Doctor Greene, who is professor of physiology and pharmacology at the University of Missouri, is a commendable contribution. It is thorough, not too exhaustive, practical, and in every way adapted to impart to the student and the practitioner the essential fundamentals of this exceedingly important subject.

LANDOLT: "DEFECTIVE OCULAR MOVEMENTS"

Defective Ocular Movements, and Their Diagnosis. By E. and M. Landolt. Translated (from the French) by Alfred Roemmele, and Elmore W. Brewerton. London: Henry Frowde, and Hodder and Stoughton. 1913. Price \$2.00.

The movements of the eyes and their anomalies constitute—as the author of this treatise correctly points out in his preface—one of the most important and difficult phases of ophthalmology. The problems they present are much more complicated than those of optics, for in optics the eye alone is the factor with which we have to deal, while the oculomotor system includes the functioning of the nervous, muscular, and even circulatory mechanism of the body. On the other hand, the analysis of the various forms of oculomotor disturbances is of the highest importance in diagnosing many diseases of the brain and nervous system. The more thorough, then, the physician's knowledge of the origin, course, and centers of association of the nerve-tracts involved, the greater is the probability of a correct diagnosis being arrived at.

In this little book, the author presents, in properly grouped fashion, the facts which are absolutely essential to an intelligent interpretation of the oculomotor affections,

particularly those which are most liable to be overlooked or forgotten by the general practitioner. Pathology is preceded by a short summary of anatomy and physiology. The subject is condensed as much as possible, consistent with thoroughness. The book does not pretend to be a textbook or even a manual, but it does purport to be, and so it is, a very handy guide to the physician, as the author well says, "in finding his way over the oculomotor system, motor system, a path on which it is so easy to go astray."

A WOMAN'S NUMBER

The May issue of *The Medical Review of Reviews* is to be a woman's number. All the articles contributed will be from the pens of women physicians whose work has achieved national importance. With the growth of the feminist movement, the economic position of women has attracted universal attention. As medicine was practically the first profession open to women, it is only proper at this time to consider whether their entrance into the medical profession has been of benefit.

In order that women may present testimony by which they may be judged, it has been deemed advisable to give them an entire issue to present the evidence of the value of their accomplishments. In the laboratory, in the hospital, in institutions, at the bedside, and in public service, women physicians have performed a valuable function. As a tribute to their earnestness, enthusiasm, modesty, energy, perseverance, and scientific acumen, the May number of *The Medical Review of Reviews* will be dedicated to the women physicians of America.

STEDMAN: "MEDICAL DICTIONARY"

A Medical Dictionary of Words used in Medicine, with Their Derivations and Pronunciation, Including Dental, Veterinary, Chemical, Botanical, Electrical, Life-Insurance, and other Terms. By Thomas L. Stedman, A. M., M. D. Second revised edition. New York: William Wood & Co. 1914. Price \$5.00.

We unhesitatingly pronounce this dictionary unique and "different." Should, however, the reader ask why and in what respect it is distinctive, one might find it somewhat difficult to put it into words. The "proof of the pudding is in the eating thereof," and, to appreciate the good (or bad) points of a dictionary, one must use it—and not for a

day or week, but for many days and weeks, months, years, even, may be. Still, even as one is putting such a dictionary to use in his daily work, he "senses the character of a good, thoroughbred dictionary."

All we can say about Stedman's dictionary is, that it is the work of a scholar, of one who knows what a dictionary ought to be, from the letter A to Z, etc., and has made such for us.

For all that, no one else need feel hurt if we express the opinion that Stedman's is the best medical dictionary ever put out in this country. In so saying, we are not belittling other similar lexicons, but are merely commending this one. It is not that the other medical dictionaries are less excellent, but the reviewer holds this one to excel in excellence. Indeed, we discover fresh excellencies in it every day we refer to it. We repeat, Stedman's is a most finished, scholarly work, worthy to take its place among the classics of its kind. And, besides, it constitutes a valuable addition to the book shelf of every progressive practitioner or anyone concerned with medicine and allied disciplines; not the least of its advantages being that its terminology has been brought right up to latest date.

GWATHMEY: "ANESTHESIA"

Anesthesia. By James Taylor Gwathmey, M. D., in Collaboration with Charles Baskerville, Ph. D. With 283 illustrations. New York and London: D. Appleton & Co.

More than once, in our editorial pages, we have called attention to the dangers attending the administration of anesthetics, and the very weighty responsibilities resting upon the person who undertakes this phase of the surgical operation; and have deplored the light, almost reckless, way in which this exceedingly important task frequently is delegated to inexperienced internes and nurses, and even to lay assistants. So, in discussing this subject, Dr. Rupert Hornbrook, of Melbourne, who is one of the highest authorities in the world on anesthetics, once declared that he was "personally unable to recall a single instance where he had had trouble under an anesthetic in which there had not been an error of technic somewhere."

Happily, this country is awakening to the importance of anesthesia and is tardily beginning to pay it deserved attention; and no little part in this awakening is attributable to the work of the senior author of the book before us. Doctor Gwathmey, who is an anesthetist to the New York Skin and Cancer Hospital,

has virtually made a life-study of anesthesia; and this book represents the net sum of his information and experience. A most interesting section is that which discusses the "daemmerschlaf," or twilight sleep—written of course before the recent public exploitation was started—the references being principally to the extensive reports published during 1907 and 1908. Reading the summary of these reports, as given by Gwathmey, one wonders afresh why medical authority in America set its face so bitterly against the method.

The book is very complete; indeed, we do not see what could be added to it or taken from it, without being redundant, on the one hand, or deficient, on the other. We heartily commend to the thoughtful study of the profession the subject in general, and this work in particular.

TIBBLES: "DIETETICS"

Dietetics, or Food in Health and Disease. By William Tibbles, LL. D., M. D. Philadelphia and New York: Lea & Febiger.

The subject of the dietetic treatment of disease has not received anything like the attention in medical literature that it deserves, and it is to be regretted that in the curricula of medical colleges it is usually either omitted altogether or disposed of in a few brief, superficial lectures at the end of the course of therapeutics. The naked truth is, indeed, that the medical profession, as a whole, is wofully and inexcusably ignorant upon this most momentous and practical aspect of therapy. Not but that there are plenty of books on the market, of a sort; but, they are, for the most part, perfunctory and empirical, and there are all too few dealing with the subject in the thorough, fundamental way that it demands.

For this reason, it is with more than ordinary satisfaction that we welcome a book like the one under consideration. The author, as a medical officer of public health, is ably fitted to speak on dietetics. It has been his special study for many years and he is a recognized authority on the subject. He deals with it, in this volume, from the ground up. The book, in short, is a most worthy contribution to an all too greatly neglected science.

We are especially glad to find that adequate attention is bestowed upon the role of the inorganic salts and the accessory elements in foodstuffs—a phase of dietetics to which scant attention has heretofore been paid. While the book is essentially devoted to

dietetic principles, the practical application of those principles by no means is neglected, but, on the contrary, forms one of its most valuable parts.

ELY: "DISEASES OF BONES AND JOINTS"

Diseases of Bones and Joints. By Leonard W. Ely, M. D. New York: The Surgery Publishing Company. 1914. Price \$2.00.

The whole subject of diseases of the bones and joints is undergoing rapid change and development and is being transferred from the realm of empiricism to that of scientific study. This work by Ely represents an effort to give a judicial, not too precipitate view of the modern status of the matter. It is, as the author informs the reader, intended primarily for the general practitioner, and, contrary to custom, instead of inflicting upon that long-suffering person a mass of detail, attempts to lay down broad general principles, with the evidence upon which they are based, and then to show how these principles are to be applied. The author, who is associate professor of surgery at Leland Stanford Junior University, lays great emphasis upon pathology; indeed, the entire book is predicated upon a knowledge of pathology as a prerequisite for treatment. He declares that whatever originality it possesses is derived from a personal laboratory study of some one hundred and twenty specimens of bones and joints.

There are a hundred or so illustrations of a very helpful character, also a marginal index in red ink running throughout the pages. In short, while there is nothing startling or pretentious about the book, it is a decidedly worth-while contribution to the working-literature on the subject.

"KNOW THYSELF" SERIES

Miss Susanna Cocroft, of Chicago, has written and published a group of books, comprising some dozen volumes in all, under the above series title, treating of various phases of physical and mental hygiene. Miss Cocroft, as most of our readers supposedly know, is the originator and conductor of a system of physical exercises for women, designed to improve their bodily health and efficiency. It is evident, however, that her interest in her sex and her efforts in their behalf vastly transcend this sheerly physical

scope, for, these books cover a far wider range of feminine needs and interests. They deal with the esthetic, the mental, the moral, and even the spiritual life of woman. There is, for instance, a book on "foods," another on "the circulation," another on "character," and still another on "aids to beauty," not forgetting a really excellent volume on "motherhood."

The truth, however, is, that every one of them is an excellent little book; quite the best of their kind that we have seen; for it must be confessed that books of this sort as a rule are mawkish, insipid. Miss Cocroft, on the contrary, has managed to pack a lot of genuinely sensible and helpful instruction into her essays, and they are really worth while. It would be a capital idea for physicians to put these booklets into the hands of their women patients—and of those not yet their patients, but potential clients—and recommend them to read, mark, learn, and inwardly digest them. They can be had of Miss Cocroft, at 624 Michigan Avenue, Chicago, Ill.

"INTERNATIONAL CLINICS"

International Clinics: A Quarterly of Illustrated Clinical Lectures and Specially Prepared Original Articles on all Branches of Medicine and Surgery. By Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A. M., M. D. Volume III, 24th Series, 1914. Philadelphia and London: The J. B. Lippincott Company.

This excellent series maintains its very high character of content and discrimination, affording a most valuable continuous mirror of medical and surgical progress, in their clinical aspects, and keeping us in touch with the best that is being done in them all throughout the civilized world. We doubt whether there is any other systematic publication of its kind that enjoys such widespread popularity, at least in this country, or one that deserves it more; for, there is no other series of which we know that furnishes so wide a range of progressive information in such practicable, usable form. It is interesting to note how large a place biologic therapy is now occupying in these clinics, which, of course, is as it should be. Yet, it is gratifying, too, to find that considerable attention still is given to medicinal treatment.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6078.—“Treatment of Pernio.” H. H. B., Oklahoma, has several patients with “frost-bitten” feet. One of his own feet was also frosted, and ever since then, when the weather gets cold, the heels and sides of the feet begin to swell and are very painful. The joints of the little and great toe, on each side, are most affected. Can hardly bear a shoe. When the feet get warm they begin to pain, but if the shoe is taken off and the foot heated, by fire or water, the pain is relieved. “This trouble,” the doctor says, “is extremely annoying, and I would like an effective treatment therefor.”

The skin of a person subject to chilblains should not be heated suddenly, especially after exposure to cold, but the circulation should be re-established gradually by dry friction, or by rubbing the part with spirit of camphor; or the patient may rub with snow or ice-water before entering the house. The feet should be bathed daily in hot solution of epsom salt (water, three pints; magnesium sulphate, one tablespoonful), then dried carefully, and Guimethol rubbed in, or the following: Menthol, grs. 15; ichthyol, dr. 1; petrolatum, dr. 1. Also, equal parts of tincture of iodine and arnica may be applied with a camelshair pencil morning and night. Some practitioners highly recommend applications of tincture of ferric chloride, full-strength, at bedtime.

When a chilblain exists, a plaster having the following composition may be applied: Capsicum pods, 1 ounce, and alcohol, 1 ounce. Macerate for several days and add mucilage of acacia, 2 ounces; mix thoroughly, brush over sheets of silk, and apply to the affected area. Practically the same effect will be secured if oleoresin capsicum is used in place of the capsicum pods.

It is usually desirable to give individuals afflicted with pernio iron and strychnine in

some form. The writer uses digitalin or cactoid, one or two granules, and two of the triple arsenates, three times daily.

When the skin is broken, the epsom-salt bath may be used and the parts then dressed with alicphen ointment (dried alum, grs. 5; ichthyol, grs. 10; phenol, grs. 5; basilicon ointment base) on gauze.

QUERY 6079.—“Hemophilia.” W. A. M., Iowa, has a case of hemophilia in a boy ten years old, and desires information relative to recent methods of treatment.

Without a clearer idea of general conditions we naturally hesitate to offer definite therapeutic suggestions, but most certainly, were we treating a hemophiliac, we should inject normal horse serum, with large doses of calcium lactate and chloride.

Hypodermic injections of emetine hydrochloride will control hemorrhage, even when severe, and should be used for that purpose.

As you are aware, the danger from hemophilia is proportionate to the age, in the young being greater; while as age advances danger lessens. In all pronounced cases, the outlook is decidedly unfavorable. You do not state whether there has been articular effusion. As you are aware, the knees are most commonly affected; next the ankles and elbows. Repeated effusions tend to the formation of adhesions, with partial or even complete ankylosis.

When the attacks are periodic, magnesium sulphate should be administered during the prodromata, with calcium chloride and lactate in full doses. Once hemorrhage has occurred, thymus gland proves most useful; 50 to 100 grains may be given daily, with local applications of a solution of the dried extract. Preparations of suprarenal gland are preferred by some practitioners. Tincture of perchloride of iron (in 1-2-dram doses, every two hours)

has been strongly advocated. We would substitute the triple arsenates with nuclein or the following combination: strychnine arsenate, gr. 1-128; iron arsenate, gr. 1-32; manganese phosphate, gr. 1-32; zinc phosphide, gr. 1-32. Gelatinous foods should be ordered and absolute rest insisted upon.

QUERY 6080.—“Delphinine in Senile Incontinence.” T. P. F., Illinois, writes: “Please tell me how to use delphinine in the senile form of incontinence of urine.”

Delphinine acts on the central nervous system. It has proven of service in spermatorrhea, prostaticorrhea and some forms of incontinence and vesical irritability. The drug should not, however, be used during the persistence of an acute inflammatory condition.

Some observers report that the drug checks mucous, or muco-purulent discharges; and exerts, in a somewhat less degree, a tonic influence upon the vesical mucosa and the kidneys. In full doses it produces vomiting, giddiness, and convulsions. In reasonably full doses it may act as a laxative; but more often it promotes diuresis, and occasions feelings of heat and tingling in various parts of the body.

The eclectics regard staphisagria as a remedy for chronic inflammation and atony of the renal and reproductive organs. Scudder, for instance, considers staphisagria a specific for irritation of the urino-genital apparatus, especially in chronic irritation of the neck of the bladder associated with temporary enlargement or irritation of the prostate. Locke says that it gives marked relief in urinary incontinence of old men, with vesical and prostatic irritation, frequent teasing or urgent desire to urinate. In our own hands, however, eupurpuroid and arbutin, with small doses of berberine, have given better results in such conditions.

The usual dose of delphinine, 1-128 grain, every thirty to sixty minutes for a few doses, to effect, then every one to three hours as may be required to maintain the impression. Bear in mind that individual susceptibility varies greatly. Patients receiving delphinine should be ordered bland or mucilaginous beverages, barley water, for instance.

QUERY 6081.—“Climate for the Tuberculous.” C. B., Quebec, inquires: “In what states besides California and Colorado can we find a climate propitious to the tuberculous? What do you think about Nevada, Utah, Arizona, and New Mexico?”

As you are aware, the best practitioners now admit that skilful medical attention in the home, even with inferior climatic advantages, is preferable to the best climate possible and inferior supervision.

Merely transferring the patient to a better climate does not mean much for his recovery. In the last stages of phthisis pulmonalis, it is worse than cruel to send the patient away from home and friends, especially when the necessary fresh air can be obtained in his own vicinity. As Hare remarks, “During the last century the climatic idea expanded so as to embrace every known variation—ocean voyages, sea and coast climates, inland regions with a high altitude and those with a moderate or low altitude, hot dry climates with a mean equable temperature, to say nothing of the supposed healing properties of pine forests.”

The one essential feature which seems to have existed from the beginning is warmth, and it would seem that the original selection of warm climates was determined by the fact that it was a matter of common observation that respiratory disorders were less frequent during the warm, dry seasons than during the cold and wet months. Then, too, it was noted that a residence in a warm, dry region often had a beneficial effect on pulmonary disorders, such benefit undoubtedly being due to the fact that in a warm climate the patient spent more time in the open air, thus securing much needed oxygen.

New Mexico, Arizona, Nevada, California and Colorado all offer climates propitious to tuberculous individuals, but in sending a patient away, we must consider the conditions present in the individual. A high altitude should not be selected if there is disease of the cardio-vascular system, nephritis, anemia, marked nervousness or cavity formation. Hemorrhage cases are unsuitable for a high altitude.

It is often desirable to send the individual to some place where he can spend a great part of his time in the open air and not be subjected to a sudden change of temperature. When a patient is financially able to bear the expense, and the disease is not too far advanced, he may with advantage be ordered a “change of climate.” Such a change, too, is advisable if the patient resides in a locality where the weather is extremely changeable during the winter and early spring months or extremely hot during the summer. When a man allows his business or profession to interfere with the treatment, he should go away and free himself for a time; so, too, the woman worried by

domestic affairs or exhausted by social calls may be sent away with advantage.

Thoroughly competent observers state that the benefits derived from a change are due not so much to a climatic influence as to a change of habits from those which are sedentary and confining within doors to those involving out-of-door life and activity, freedom from cares, anxiety, and annoyances of business at home, and it may be added, the moral effect of the hope of being benefited by climatic influences. We have all seen patients show slight improvement or steadily progress to a fatal issue in every variety of climate and there is no question that out-of-door treatment, properly conducted, proves effective in the eastern or middle as well as in the western or southern states.

In our own tuberculosis colony at Ottawa, where the results secured have been uniformly excellent, patients practically live out-of-doors, even in the winter months, and, while, of course, it may be a coincidence, in the writer's own experience of six patients in about the same condition three sent west benefited little while those placed in the Ottawa Colony seemingly recovered. We say, "three sent away benefited little." In fact, one of them died shortly after returning from Colorado.

To sum the matter up, it is our personal opinion, shared, we believe, by most men treating the disease, that where improvement may rationally be expected it will be secured more readily by proper sanatorial treatment at home than by forced sojourn in some distant state; however, when we do send a patient away, we should send him where the air is warm and dry in the daytime and the nights cool, and it is usually desirable to avoid excessive altitude. In every case, it is essential that the patient be so situated that he may have proper care, good food, and sanitary surroundings. Too many of the far-off tuberculosis climates are lacking in these respects.

We believe that you can obtain on request from the Surgeon General's Department, Washington, a report covering the subject fully. You will find an exhaustive chapter on "The Role of Climate in the Treatment of Pulmonary Tuberculosis" in Bonnie's, "Pulmonary Tuberculosis and Its Complications."

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 QUERY 6082.—"Administration of Salvarsan." A. C. J., Kentucky, asks: "Where can I get Ehrlich's '606,' or salvarsan? Can I use an ordinary 4-Cc. hypodermic syringe for intravenous injection? I have several cases in my practice in which I want to use this

preparation. What is a good text book on this subject?"

Doctor, we strongly urge you to think more than twice before attempting to administer salvarsan. Its administration is best left to experts.

Presumably we need not tell you that salvarsan is sold in tubes containing 0.6 Gram in solution. The dose is from 0.3 to 0.6 Gram, the susceptibility of patients differing greatly. The later-introduced modification known as neosalvarsan is not as prone to cause undesirable byeffects or as intense local or systemic reaction as does salvarsan. Its dose is somewhat larger.

The more prominent constitutional disturbances following intravenous injections are these: In about six hours after the injection, there generally is malaise, chilling, more or less abdominal cramping, nausea, even vomiting. The temperature rises, from 101° to 104°F., the hyperpyrexia lasting about five or six hours. Profuse sweating may occur when systemic infection exists, and it results from the endotoxins formed from the killed spirochetes.

Intramuscular injections of salvarsan give rise to sciatic pains radiating down the legs, then acute pain develops at the site of the injection, which may last several hours. There also appears an erysipelatous condition about the point of injection and may gradually increase during three or four days. The induration usually disappears in from ten days to two weeks, although some nodules may not be absorbed for several weeks. The local reaction is milder when the suspension is used. The temperature rises to 101° F. Occasionally blood, albumin, and casts may be present in the urine; sometimes hematuria is observed.

Salvarsan and neosalvarsan, with literature concerning them, are obtainable of the Farbwerke Hoechst Co., New York City. An instructive chapter on this subject will be found in Guiteras' "Urology," Vol. II.

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 QUERY 6083.—"Tachycardia. Frigidity." E. E. D., California, is treating for tachycardia of long standing a married woman, 28 years of age, who has had a number of abortions, but no living children. His statement reads: "There is a mitral lesion. She has had a Neisser bacillus infection, but no syphilis. She is a great deal troubled with gas on the stomach and with obstinate constipation. The Doctor has dosed her liberally with cactoid, hyoscyamine, glonoin, strychnine, bromides, chromium sulphate (4 tablets

a day), and veronal, also cathartics galore; besides ordering high enemata and rectal feeding. For days her heart beats faster than anyone can count, then rests a few hours, only to begin over again with renewed vigor. When the patient's condition is at its worst, there is no perceptible pulse at the wrist. Her blood pressure indicates 110. There is albumin in the urine. There is some dropsy. The only nourishment she can retain is malted milk, beef tea, and buttermilk. She is very much emaciated and weak. It seems that she must die soon.

"In your opinion would digipoten be of any service? It seems that the gas in the stomach and intestines has something to do with the attacks, for vomiting relieves the palpitation quickly. I have been led to believe that possibly there is an obstruction high up in the alimentary tract. I also have thought of some sequel of syphilis, perhaps an aneurism of the thoracic aorta; but she neither has pain nor can I elicit any bruit. How would 5 to 10 drop doses of chloroform or calcidin in large doses with ergotin work?"

Are you sure that your patient does not suffer from nephritis? Under the circumstances, we would hesitate to give veronal. We do not quite see where the indications for chromium sulphate appear.

Cactoid and strychnine ought to prove beneficial. In some of these cases sanguinaria given in alternation with cactoid works beautifully. Sparteine is another drug which, under such circumstances, deserves consideration. The main characteristic of the drug is an energetic stimulating influence of the heart, the pulsations of which it regulates while augmenting the energy of the contractions. It does not lower or raise blood pressure. The increase of energy is such that a tracing taken from a patient with advanced valvular lesions, one-half an hour after the exhibition of sparteine, will scarcely differ from that produced by a normal heart.

The drug has been termed the "cardiac metronome;" for if the pulse rate is below normal, the drug causes acceleration; and if accelerated, reduces it to normal. Moreover, the action of the drug persists. The vasomotors are not influenced; the phenomena of accumulation are not noticed; moreover, sparteine is eliminated easily by the kidneys, even in nephritic subjects.

This makes it a particularly valuable medicament in all cases of asthenia, with an unsound myocardium or an insufficient one, where the pulse is irregular, intermittent, and arhythmic.

We would not exhibit chloroform under the circumstances, but would give the patient sparteine and arbutin, and order her to drink barley water freely, two pints a day. Search carefully for pelvic infection. To relieve the gastric disorder give strychnine arsenate, gr. 1-128, quassoid gr. 1-64, papain (papayotin) gr. 1-32, juglandoid gr. 1-6, fifteen minutes before meals, and papain (papayotin) gr. 1-3, charcoal (vegetable), gr. 1, sodium bicarbonate gr. 2-3, half an hour after food.

It is impossible of course to prescribe very definitely with our limited conception of basal pathological conditions.

Our correspondent further asks what can be done for cold, passionless married women, but no satisfactory answer can be given.

Some years ago, echinacea was highly recommended for frigidity in women, but failed to meet expectations. As a matter of fact, the cause of this sexual torpor must be ascertained before anything can be done. Frequently this abnormal but fast-multiplying condition is of psychic origin. For instance, the woman may be as "cold as an iceberg" with relation to one man, but thaw out and become extremely passionate with another mate. More often, this state is congenital or else the function failed of development at the period of puberty, either through disease or as a consequence of physical and psychic exhaustion, such as especially our modern social life in its every phase implies. Whence the stigmatization, popularized by Sir Almroth Wright, as "the third, or neutral, sex."

QUERY 6084.—"Treatment of Stammering." L., Tennessee, writes: "A boy of 15 years stammers or stutters very badly. He has been treated, without result, by a number of physicians. The father stutters some. Is there any way to cure the young fellow?"

To begin with, doctor, one should be careful to make a distinction between "stammering" and "stuttering." In stammering, individual sounds are produced with difficulty, while in stuttering syllabic combinations cannot be enunciated, as reference to the dictionary will show. We Americans seem to be rather careless in the application of these terms.

Stammering often is accompanied by some defect in the organs of articulation, the teeth, lips, tongue, or palate—which is not the case in *stuttering*. Naturally, the treatment must consist in careful training and the correction of whatever abnormalities may exist.

Stuttering is met with more frequently in boys than in girls, in the proportion of four to

one. The condition may arise from imitation, while heredity is an important etiologic factor. Not infrequently it is to be regarded as a mark of degeneration. Many children do not begin to stutter until they are six or seven years of age, or even older, but this writer many times has observed the defect at the age of three or four years. At the latter age, usually it is aggravated or even initiated by nutritional disturbances. In such cases, change of air, thorough elimination, and the administration of tonics prove beneficial.

When the condition has become habitual, or there is a hereditary taint, systematic and somewhat prolonged training, under competent teachers, in breathing and vocal gymnastics will be required. Several such institutions exist in our country. We suggest that you address the Secretary of the Board of Education of Chicago or of New York, asking him to put you in communication with such institutions, or you may write the Chicago School for Stammerers, 332 South Michigan Avenue, Chicago, Illinois.

QUERY 6085.—“Chronic Migraine.” C. M. W., Massachusetts, reports a case of chronic migraine of many years’ duration. “The patient is a single woman of thirty-seven, of a high order of intelligence, is energetic, possesses considerable executive ability, and is an educational director in a large institution in the middle West. Our correspondent has attended her in hundreds of severe attacks of hemicrania, which sometimes last six days, and she has consulted many other doctors; but, instead of obtaining relief, these attacks are becoming more frequent. She is a “self-made” woman and, naturally, has worked hard to attain the fine position she holds today. “I have told her,” writes the doctor, “that I think these excruciating headaches represent the ‘kick-back’ of the nervous system. I have eliminated practically every other cause. Her various functions seem normal and she is careful about her eyes and digestion. There seems to be no diseased condition of the genital organs. When I first knew her, menstruation occurred every three weeks and bleeding was quite profuse. It took me two years to restore normal conditions, by means of internal remedies. She had severe acne rosacea, but this was entirely cured about five years ago by electrotherapeutic methods.

“If it were not for these severe attacks of headache, which compel her to go to bed, she would be one of the finest specimens intel-

lectually and physically that could be found among our American women today.

“The woman is of medium height, has reddish-brown hair, abundant and curly; blue eyes; a skin not very fair. She is a small eater and rather particular about what she eats. She is not fond of desserts, but fond of candy; however, does not overindulge sweets. She takes only a small cup of coffee in the morning; does not use tea at all, and absolutely no liquors of any kind. She eats every kind of food but cereals. Eats very little fish and does not overeat in meat. Drinks lots of water. Is very fond of fruits and nuts. Likes outdoor life, but does not get enough of it. Is a good sleeper when she does not have her headache, and goes to bed in good season as a general thing. Knows the value of sleeping with windows wide open. In fact, she lives a thoroughly hygienic life and is well housed.

“I will give some idea of what an attack consists in. The pain is located in one or the other temporal region, sometimes affecting one eye on the same side, sometimes radiating to the side of the neck. It is steady and severe; may be throbbing, with sharp pains at intervals. It always nauseates her badly, but she hardly ever vomits. She has to lie down and close her eyes. Wants to be quiet and in a darkened room. Is obliged to loosen the collar, even though it may not be a tight one, and likes the rest of her clothing loosened. The most relief is from a hot-water-bag (very hot) held to the site where the pain is the worst. Sometimes sodium bromide will cause enough ease so that she can get to sleep. But sleep does not always send the headache away. She will wake up in the night and it will be as bad as ever; and she often wakes up in the morning and has to go to her day’s work with it. Friction, such as firm rubbing, or using a coarse comb over the top of the head, seems to give her ease at the time. She does not want to eat or drink while it is the worst. Usually she lies very still with it, as though her powers were numbed. At other times (but this is rare) she will hold her head in both hands and groan, and look up like a suffering dumb animal and ask, ‘What shall I do with my head?’ She is quite stoical by nature, so, I know when she does the latter that the pain has driven her almost crazy. The headache leaves her scalp sore and tender. She complains of a sensation of numbness with the pain, and she looks stupid. She does not appear to have anemia.”

Now, doctor, the essential point here is, to discover the underlying cause. You may be

aware that there is a tendency toward a decrease in the intensity and a complete disappearance of the condition at about or after the age of fifty. Also, recently attention has been called to a certain relationship between migraine and epilepsy, the epilepsy following, as a rule, after years of periodic migraine attacks.

In one woman, who died at the age of forty-two (of cerebral thrombosis), Jacksonian epilepsy developed during the last five years of her life. The attacks were limited to the right arm and that side of face, taking the place of the early typical migraine. At necropsy, extensive cerebral arteriosclerosis was found to exist. Lowered nerve tone, eyestrain, lithemia, and a score of other causative conditions must be considered.

We have found that these attacks frequently may be aborted by early and thorough purgation and small doses of cannabin and atropine.

In this particular instance, we should be inclined to give lecithin and nuclein, in alternation with the combined phosphates of calcium, iron, potassium, and manganese. Give a laxative saline draught every morning upon arising. At the slightest sign of recurrence, give calomel, gr. 1-6; podophyllin, gr. 1-6; bilein, gr. 1-12; half-hourly for four to six doses, followed by magnesium sulphate; then order minute doses of cannabin and atropine. Should an attack occur, you will find nothing to afford as prompt relief as this combination: acetanilid, grs. 2 1-2; sodium salicylate, grs. 3; ammonium bromide, grs. 3; caffeine, gr. 1; calcidin, gr. 1; charcoal, grs. 2; oil of cajuput, m. 1-2; the patient to take this dose with at least 4 ounces of hot water.

The age of your patient, and the fact that she is a brain-worker and has been under intense nerve strain for many years, would lead us to suspect more or less cerebral arteriosclerosis. We assume the eyes have been examined by a thoroughly competent optician. Pelvic reflexes may, we think, be excluded. The main essentials in this case are, of course, the maintenance of circulatory equilibrium and the elimination of waste.

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 QUERY 6086.—“Chromidrosis.” B., New York, writes: “A very peculiar color reaction that defies my chemical knowledge is manifesting itself in the perspiration of three of my patrons. These persons are, a husband and wife, not long married (the wife not quite six months pregnant), and the mother of the husband. It was first noticed that the younger woman’s underwear under the arms

and between the thighs was stained distinctively pink. She had been taking a cholagog tablet containing the sodium bile-salts and phenolphthalein, and I attributed the condition to the reaction between the phenolphthalein and the sodium. There was a fine erythematous rash, accompanied by a good deal of itching, over the forearms (anterointernal aspect), inner thighs and legs, later extending over the entire arms and legs. This now has practically gone. The acidimeter indicated absence of acidity of the urine. About one week later, the same discoloration was found on the husband’s pajamas, and still later his underwear also was pink in places where he perspired. No symptoms were manifested. Soon after that, the mother’s became similarly discolored, but she likewise had no untoward symptoms. Neither son nor mother have taken phenolphthalein.

“The stains are not decolorized either by ammonia or acetic acid; they are not bleached in the sun. Different kinds of soap have been used without effect. The stains seem to be intensified rather than dimmed by washing.

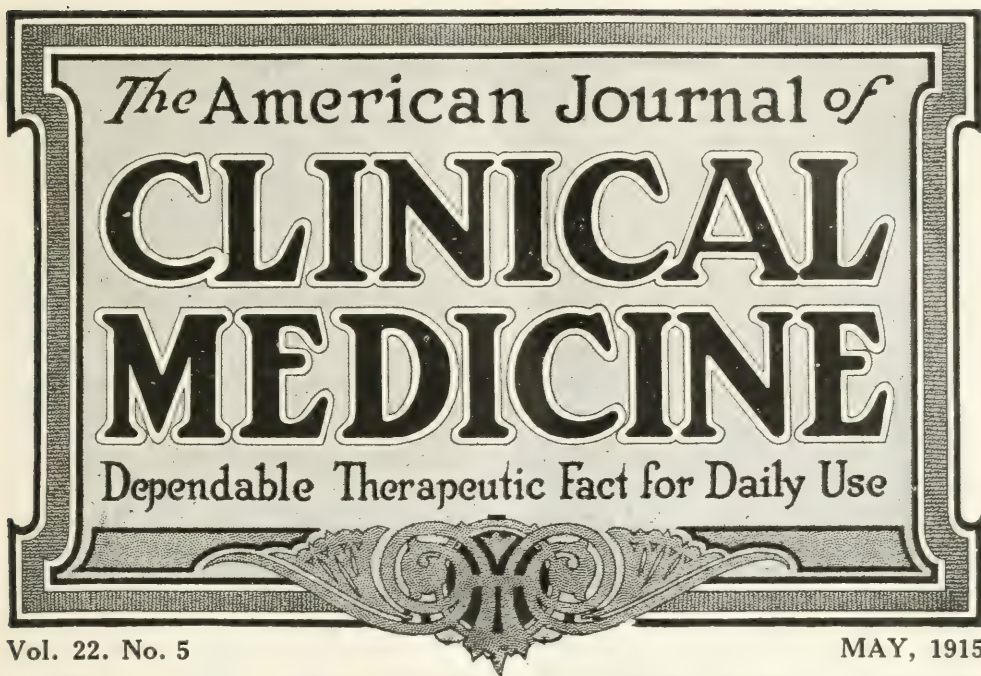
“No food different than formerly or anything unusual is being eaten. No new wallpaper has been hung, nor was any decorating done. The water is from the well or city water boiled and cooled, and is the same as always. The milk is believed to be untreated, and no change has been made in the dealer.”

Doctor, you are probably dealing with a case of chromidrosis, a condition owing to the presence of certain chromatogenous bacteria; those most commonly predominating being a species of the leptothrix. These parasites are established in the hair follicles and the bacteria utilize the perspiration as food.

Uterine disturbances and constipation predispose to the invasion. The condition most commonly is encountered in women of the neurasthenic type. The fact that the young woman had taken phenolphthalein possibly might explain the phenomenon: inasmuch, though, as her husband and the mother had not taken any of the drug, the influence of outside agents must be excluded. It is rational to assume that the bacteria may spread from one member of the family to the other.

Doubtless the persistent use of a solution of hydrogen dioxide and (separately) of mild solutions of mercury bichloride would prove promptly remedial.

We suggest that you examine for leptothrix the hairs from the axillary and pubic regions and also skin scrapings from these areas.



Si Jeunesse Savait!

TWO French proverbs carry with them the wisdom of the ages:

"Si jeunesse savait!"

"Si vieillesse pouvait!"

If youth but knew! If age but could!

Older and more inscrutable than the riddle of the sphinx is the problem of combining the knowledge gathered during one's life, the wisdom evolved by thought based on experience, with the push, the fire, the incentive, the activity, the strength of youth. Has not every father sought to pass to his boy the lessons gathered during his own career? Has he not noticed, with a disheartening sense of failure, how his words go into one ear and out of the other, how the boy pursues his own way, pulling to pieces the painfully reared creations of his fathers to furnish materials for his own structures? Sooner or later we conclude that every man is going to try for himself; is going to stick his finger on the paint, to see whether it is really fresh; to stub his toes against that same old April First hat full of bricks.

But the boy grows into manhood, too, and, as he gets his own experience, he comes nearer to us—for, law rules, and two and two make four. So it is that the world teaches each new generation the lessons it forced upon

the one preceding. While the youth disdains his father's wisdom—looks upon the old man as a mossback, a back number, an old foggy, a drag upon progress, a brake upon the wheel, youth grown up, begins to recognize that there is, after all, some truth in the oldster's warnings, and when matured realizes this the more, until he and his generation get to wonder how the fathers ever could have learned so much.

It is the law of nature: nature which rules the gods themselves and all things sublunary as well as celestial. It is kismet; the wheel that revolves; fate; the planets whirling in their orbits; the seasons succeeding each other in due turn. Youth is enterprising, and must learn. Age is conservative, has learned its lesson, and seeks to secure its winnings, the while youth seeks to grasp its share.

Every generation of doctors buries an inestimable treasure of gems and gold in its sarcophagus. Each successive new breed, or brood, trades, mines, robs, gathering a new hoard for itself, now and then digging up from the tumuli of the antedeceding generations some of the buried treasures. The old gems receive new settings, and the old gold is re-minted, with the bust of the reigning monarch

replacing the grim old conqueror of the past. Still, we make progress.

Progress is peculiar. Mainly we add to our collection of facts. We get ahold of new remedies, and forget the old ones. We devise new methods, and neglect the former. We widen our scope, and the channel loses depth. Everywhere there enters that dreadful law of compensation, to subtract from our expectations. We institute vaccination, and save innumerable multitudes from a loathsome death from smallpox, and then many of those thus protected die of scarlet-fever. We improve domestic, personal, and municipal hygiene, thereby prolonging the lives of many who otherwise would have died in childhood—and they survive, only to propagate a race of weaklings, who possess less resistance than that vigorous race that ere this had survived in the former fierce struggle for existence. Our improved methods and remedies work just well enough to give us, dealing with the deteriorated race, as good results as our fathers obtained with their cruder weapons but more vigorous subjects.

I am requested to write a paper urging young doctors to be conservative. I shall not do so. I do not believe in it. I do not wish to see young men conservative, any more than I want to see boys with the graces and accomplishments of girls. It is not natural. A young man must be radical, energetic, rough, initiative, enterprising, quick to take up the new, disdainful of what has already been done and won. He should take any and every novel suggestion and push it to the utmost possibility. He should not be satisfied to let well enough alone or to do as well as his ancestors. He should not be contented or easy to get along with, but, full of discontent, ceaselessly striving to push out and compel neighbors to give him more room. He should insist that he is to be reckoned with and placated, or he will stir up trouble. He should be a very uncomfortable and troublesome neighbor.

When Harvey, Jenner, Waterhouse, Lister, Tait, Morton, McDowell are sat down upon ponderously by the very big men of the profession, they are not to consider themselves absquatulated or mashed flat, but to keep rising in rebellion and be sticking pins into the superincumbent weight, until the seat becomes too uncomfortable; and in due time the positions will be reversed, and the sittee becomes the sitter. When the powers and principalities, the disciplined armies and the 42-centimeter howitzers, the zeppelins and the submarines, the mines and the torpedoes,

the great guns and the quick-firers, all are trained upon the twilight-sleep advocates, it is up to them to keep a-fighting, taking as their war-cry the immortal words of Paul Jones, "I have not begun to fight yet."

Every great truth wins in time. When you have met all the opposition ranked against Christianity, you may begin to be discouraged, but not sooner.

There is a better thought than that of advising young doctors to be conservative—let them join forces with the older men and make a team of it. Pair off thus, and you have a far greater power than could be exercised by two of either. Let the wisdom of age be made active by the energy of youth. Let the force of youth be directed and kept from falls by the experience of age. Waste of misguided effort is avoided, waste of inertia is prevented. The wooden shaft receives a lance head of steel. Enticing by-paths that lead nowhere are avoided, the straight road is followed, and we get there. The brake on the wagon is useful, but it does not pull a pound. The team is powerful, but the vehicle runs off the road into the jungle, unless restrained.

There is much more that could be said—but I know every last one of you is dying to say it himself, so—finis!

Mr. Wells is writing in the strain of the prophet about the coming alterations in the map of Europe. They are of little importance compared with the fact that all the economic energies, the intellectual powers and aspirations which made for civilization, suppressed in Europe, will have made their home in the new world. The sun of humanity is going to rise brilliantly in the west, and Europe is at the close of its long day, its royal domination over the fortunes of the world.—George W. Russell.

ARE YOU KEEPING THE RECORDS

We fear that many physicians are not keeping the records required by the Federal Narcotic Law. As we have already stated, it is of the utmost importance that every practitioner should follow to the letter the rules laid down by the Commissioner of Internal Revenue. Those who neglect to do so will get into trouble.

There is no doubt that the law will be enforced. Already physicians in different parts of the country are being visited by Federal inspectors. While the Government is undoubtedly inclined to be lenient at the present time, since the law is not fully understood as yet, and trade conditions are still somewhat chaotic, it is to be expected that there will soon be a general tightening-up all along the line.

Again we must urge readers of this journal to make their inventories of narcotic drugs on hand on March 1 (if they have not already done so), secure record books, and preserve therein records of all drugs dispensed or administered, with the single exception of those personally administered to a patient when away from the office.

In case of doubt as to whether a record should be made or not, *make the record*. Take no chances whatever. Also, in treating those suspected of being narcotic addicts, great caution should be observed that none of these people take advantage of your generosity or ignorance of the legal requirements.

For the convenience of our readers, we offer a Narcotic Record Book for the use of physicians, dentists and veterinarians. In addition to the blank space required to fulfil legal requirements, this book contains a careful digest of the requirements of the law as it affects physicians, dentists, veterinarians and pharmacists; also, blank space for inventory, affidavit form, and so on. It is handsomely and substantially bound in cloth, printed on fine paper, ruled in red, provides space for 1500 records, and is of pocket size (same as your visiting-list), so that it can be carried wherever you go. The price is only 25 cents. The same book, beautifully bound in seal grain flexible leather, for 75 cents.

I am a true laborer: I earn that I eat, get that I wear; owe no man hate, envy no man's happiness; glad of other men's good, content with my harm; and the greatest of my pride is, to see my ewes graze and my lambs suck.—"As You Like It."

LEGISLATIVE QUACKERY

During the winter just passed the United States Congress and the legislatures of some forty states have been in session. The number of bills introduced in these aggregate bodies have been greater than the number of statutory enactments of the English parliament from the time of the Conqueror until the present time. These bills have attempted to regulate almost everything that is in the heavens above, and in the earth beneath, and in the waters under the earth. There is no business or profession that has not been attacked; no political, social or economic evil for which some legislative remedy has not been prescribed. They have sought to reach into all the affairs of public and private life.

Among the large number of subjects which have engaged the attention of these legislative tinkers, the practice of medicine, and

matters of health and sanitation generally have had a conspicuous place. Some of the laws enacted upon these subjects are excellent, were greatly needed measures, and will redound to the benefit of humanity. But it must also be confessed that the great majority of them represent merely the restless and hysterical craze for legislative activity which has taken possession of the medical profession in common with the rest of the American public.

How is it that the medical profession, which, of all bodies of men, is the greatest stickler for conservatism and stands in the greatest abhorrence of everything that savors of quackery, lends itself so readily, nay eagerly, to that most brazen of all quack remedies for social and economic ills, the nostrum of the law? What would be thought of, or done to, the physician who should keep a big bottle of guaranteed pain killer, or "sure cure" specific on his shelf, and to every patient who came to his office should dole out a good stiff dose of this cure-all, with positive assurances to the sufferer and his anxious friends that it would not only relieve his present troubles, but effectually protect him from all recurrences of a similar nature? Yet that is practically what the profession is doing in respect to all conditions of the body social with which it feels called upon to deal.

If it were not so serious a matter it would be ridiculous. Such forced legislation is not only never effective, but it always defeats the very purposes it is intended to carry out, and delays the development of public sentiment in right directions. Legislation ought always to represent the crystallization of already prevailing public sentiment, not an artificial attempt to precipitate it, which will invariably result in cloudy confusion. Only the most settled and established truths and principles of action are fit and proper subjects for legislation; and everybody knows that in medical science these are exceedingly few and far between.

The most serious aspect of all this legislative craze is that it ties the hands of the independent, individual medical practitioner, and sets up a hindrance in the way of scientific progress. It tends to cripple and restrict the *clinical* side of medicine. If medicine had always waited for authoritative certification and regulation of her materials and methods, there would never have been a science of medicine; and if she is now to be compelled to adopt this attitude all along the line, there will be a dead halt to her advance. Nor will it avail to say that medical practice must keep

behind the advance of authoritative and legalized medicine; for every man with a grain of sense knows that clinical medicine, on the contrary, is, and always must be, in advance of every other phase of medicine, as a ground-breaker; that it furnishes the stimulus and inspiration to all the others; and without its forward influence all other branches of medicine would lose their motive and their *raison d'être*, and fall into desuetude.

For all these reasons, the multiplication of medical laws and official "regulations" restricting and interfering unnecessarily with the conduct of the physician and with his materials, is both silly and vicious, and it is high time that a halt was called upon it. It does not have its rise in any real public demand, nor does it represent any natural crystallization of well-matured public sentiment, which are the only genuine bases for all kinds of legislative enactment.

When you come to think about it on this old terrestrial ball,

Rimmed with roses in the springtime, heaped with fruit-age in the fall;

Though we all were born a-growin'—though we're axle-deep in doubt,

There is really very little for the world to growl about.

CANCER—A SUGGESTION

Here is a suggestion which may be absolutely valueless. On the other hand, it may prove of the utmost importance. Only a clinical try-out will tell whether it deserves extended consideration on your part.

Someone should try emetine hydrochloride in the treatment of cancer. This alkaloid seems to exert the most powerfully destructive action upon low forms of life of any remedy thus far introduced. You know what it will do in tropical dysentery. Many of you are already familiar with its action in amebic pyorrhea. Read the report of Doctor Frazier's experience with the drug in treating typhoid fever, as reported in *The Medical Record*, and printed in abstract elsewhere in this number. Read also the letter from Doctor Burrow, of Bolivia, South America, who shows that it is curative in another disease heretofore thought incurable—*la espundia*, or "tropical sore."

Cancer has long been thought by many to be caused by protozoa. While its etiology remains unknown and uncertain, there is at least the possibility that the preceding hypothesis is the correct one. If it is, then emetine may prove the remedy sought for all these years. We admit that the probability is a small one, but is it not at least worthy of consideration?

We put the question to our readers with the hope that some of them will take the next step. Who will do this?

IMMIGRANTS AND DISCIPLINE

We may bemoan as much as we like the passing of "the good old days," when every man looked out for himself and suffered if he were not smart enough. True, the system developed self-reliance and keenness and the grand old pioneer qualities generally. It was a system for strong men, not for weaklings that required parental supervision. But it has gone, and the other system has come in. We are to be very much more governed; told what we may and what we may not do; held in restraint; and the Allemannic watchword *Verboten* replaces the *E Pluribus Unum*.

Well, what of it? What is there to do but make the best of it and try to twist this fagot of crooked sticks around our kettle until it boils better than ever? If we are to have discipline and organization, let us, as physicians, come into the game.

Why should Ivanoff and Sciancaferro and Orlaczsky and Pietriwicz and Oleson and Silberstein and Kohacz and Ali Khan and Papanopoulos and Mustapha and Gschwaendner and Jonikaitis be permitted to employ any doctor they happen on, when they don't know enough to tell a real one from an 'ist? Why should they be allowed to eat poison and drink helfire and raise hell at their own sweet will, while we wait until they get awake and partly civilized, or until their kiddies grow into real Americans? Just divide them up into centuries and assign each group to a municipal doctor, to keep them well.

The Germanic ideal of discipline and organization is crude and primitive. It may be improved upon in every direction. We have about one doctor here to each 600 people. Organize these into groups, put a doctor in charge, and let him instruct them in the science of sanitation, which is the very brightest star of modern civilization, the growing-point of modern progress. Let each individual be taxed accordingly, from a dime to a dollar a month, and pay the doctor a salary that will enable him to do his full duty, keep up with the progress of the profession, and illustrate his teachings properly.

Liberty, as we understand the term, is a very different thing from what these undeveloped immigrants know as such. They come from lands where the ancient feudal restrictions and the modes of thought based

thereon have as yet been but partly thrown off. They are accustomed to being ordered about, thought for, directed; they touch their hats to Authority, even to Uniform. Their ambition still is limited, as in English books, where an aspiring youth is assured that if he keeps on in the good way he may win the approbation of the squire and even get in time to be coachman!

Why confer on these people all the privileges we enjoy, without due preparation? By doing this, we arouse in them a belief that liberty is freedom and has no limits. They have to try it out and see how far they can go. The labor-agitator finds willing minds and ready hands among them; the distinction between real liberty with respect for the rights of others, and license with no limits has to be learned by them. Dull, insensate, brute impulse has to be met with the strong arm of the law before the lesson is learned. The primitive impulse to take by force, to live off of others without work has to be weighed down by the acquisition of family, home and personally owned property before the civic development occurs.

No violation of sentiment, no disappointment, no revulsion should occur, if these people, on their arrival here, were assigned to the supervision of government officers, health-directors, who should assign homes to the immigrants, and also occupations where they would be most likely to make good. The cotton-growing Armenian should go the waiting fields of the South, instead of to the northern factories. The knowledge and skill of the farmer, the vintner, the raiser of fruit, truck, rice, silkworms, poultry, cattle are a large part of the capital brought to our shores by these men; and every bit of this should be utilized here, simply giving the owner the benefit of the larger field, the freer chances for development, afforded by our own country. The man who made his living in Servia raising pigs or by raising truffles in Perigord should make a fortune here in the same pursuits.

What we give these men is, first, opportunity, second, development. For the latter object, there would be a vast improvement were each to be placed, as suggested, under a government health-officer, who should oversee the dwelling, the food, the domestic and municipal sanitation. The Slavonian peasant need not and should not be allowed to live here like a pig. From the day of his landing, he should understand that, if he is to become an American citizen, with all the rights and privileges appertaining, he must live like an American.

It is little wonder that he fails to comprehend our system at once and that he mistakes our liberty for license. Let the years that our laws place between his landing and full citizenship be spent in a tutelage that really develops him into capacity for what he gets, instead of the meaningless requirements of "knowing the Constitution" by reading it, and what not.

This is the more necessary now that we are expecting a huge addition to our population, following the ending of the European war. We should prepare for the organization and assimilation of the crowds soon to be on the way. What better way than this of organizing a corps of sanitarians to take charge of the hordes?

The ideal doctor is a judicial observer. He is cool, quick of decision, with plenty of initiative. He will help people, whether they can recompense him or not. He is an idealist consumed with desire for the actual, visible accomplishment of something for the direct benefit of the race.—R. H. Schaufliker.

THE PASSING OF ALCOHOL

A few good things have already come out of the European war, terrible as it is. Russia, by a stroke of the imperial pen, has abolished the sale of vodka; and Great Britain bids fair, by an equally drastic legislative enactment, to end the reign of alcohol among her people; two sweeping and far-reaching denouements which could hardly have achieved such a rapid development under any other conditions, and of which the immediate and ultimate effects can scarcely fail to be of immense advantage to the nations concerned.

At first blush it might seem that here are two glaring examples of the very type of premature, forced legislation which we have just taken occasion to criticise and discredit. Looking a little more closely, however, they will be found to furnish, on the other hand, conspicuous instances of precisely the opposite—of legislation which really represents the crystallization of a slowly matured public sentiment. The feeling against alcohol, among thoughtful and decent people, at least of the Anglo-Saxon nations, is no sudden, hysterical affair. It has been growing for many years. It was bound to crystallize, sooner or later, into concerted action in the shape of prohibitive legislation.

In England, the process of crystallization has been hastened by the pressure of military exigencies, as high pressure will always hasten a crystallizing process; but, except for this, there is really nothing abnormal about the

situation. To change the figure rather abruptly, Great Britain was "ready for the question." Under other circumstances, to be sure, it might have been tabled for a few years longer; the war has forced the vote a little, but that is all. And the alacrity with which the country has received and supported the motion is sufficient evidence that it found a response in public sentiment.

The same denouement is inevitably and irresistibly on the way in the United States. No one who has watched the development of popular feeling on the subject for the past ten years can doubt it for a moment. We have no pressure conditions here which are likely to force crystallization in any sudden or precipitate fashion; the process will take its normal, gradual course. But it is none the less inevitable. Nor will it, we think, be long delayed. Easily within the reasonable lifetime of those of us who are even on the shady side of middle life, this country will enjoy universal prohibition.

We say "enjoy" deliberately and advisedly. Twenty years ago we might not have said so. If it *had* been forced upon us as the result of hysterical, fanatical propaganda, we should doubt both its desirability and its effectiveness. But because it comes to us as the natural outgrowth of experience and public sentiment, it cannot be other than beneficial.

Of course, our temperance friends will take to themselves a great deal of credit for the change in the situation; and it would, in fact, be strange if the persistent efforts of these earnest propagandists had not made some impress upon the status of alcohol. But the real factor in its decline has been the growth of a calm, unprejudiced public opinion. One by one, the fallacies which bolstered its use have, under the light of modern knowledge, been disproven and discredited by the application of reason and the showing of fact. Far from being an expression of fanaticism, the situation represents the exercise of sound common sense.

It will, of course, involve a little sacrifice by those among whom alcohol has never been an abuse. But a sacrifice of what? An indulgence, only; a luxury, and a questionable one at that. There is none of us that will be any the worse for the abstinence. Nay, let us be honest. There is not a single man Jack of us but will be the better for it. Not by the farthest stretch of imagination can drink be regarded as one of the necessary elements in the right to life, health and the pursuit of happiness which is guaranteed us by the constitution, and for which we are properly

jealous. And the causes of crime and wretchedness and poverty and unhappiness which its abolishment will at one fell swoop remove make every other consideration look picayune in comparison.

We repeat, this is the kind of legislation that is at once benign and effective—the legislation that represents the crystallization of public sentiment, spontaneous and unprejudiced, which has slowly gathered strength in every class of people, irrespective of politics or religion or personal interest, until its enactment into law is merely the formal expression of what has already become a virtual law. This is the old way of making laws. It still prevails, to a large extent, in England. Would to heaven it would come into fashion again in this country! There would be fewer laws on the statute books, to be sure; but such as were there would be sane, rational laws, enforceable and enforced, instead of the farcical freaks of premature legislation which now encumber our all-too-plethoric tomes.

He drew a circle that shut me out—
Heretic, rebel, a thing to flout.
But Love and I had the wit to win:
We drew a circle that took him in!

—Edwin Markham.

TELL US ABOUT THE SUMMER DISEASES

In our next few issues we should discuss the problems of the summer months. Among topics of timely interest worthy of your special attention are such subjects as

Infantile Diarrheas.

Diarrheas of Adults.

Intestinal Antiseptics—How to Use Them.

Dysentery, North and South.

Experience with Laxatives.

Food Poisoning, and How to Treat It.

Biliousness and Other Forms of Intestinal Indigestion.

Typhoid Fever: Suggestions as to Its Prevention and Cure.

How I Stopped the Hemorrhage.

Bulgarian Bacilli in Summer Diarrheas.

Experiences with Copper Arsenite.

How to Purify the Water.

Infantile Convulsions, and How to Handle Them.

Teething Troubles, and How They Should Be Treated.

Pyorrhea.

Many other topics will doubtless occur to every reader. Please pick out the one which suits you best and write us about it. We shall be especially appreciative of short articles, from 300 to 500 words in length,

regarding actual clinical experience with the summer diseases. Articles on diarrheal diseases will be particularly welcome. We wish we might get a hundred such articles in time for use in our next issue. We could not print them all, but we could and would use many, providing they were short, snappy and practical.

Give us not too much theory, but all the helpfulness that you possibly can. That is what our readers want, and that is what you want, too, or I miss my guess.

We want therapeutic and diagnostic help, and records of clinical experience.

How many will send in articles? Why put it off—why not let us have a short one today? You do not need to fix it up; just make it a "letter to the editor," and he will do the "fixing up" for you.

Don't forget to tell us what you are doing with emetine.

He was ready to sacrifice everything to his principles—which was right; but he sometimes mistook his prejudices for his principles.—Ellen T. Fowler.

DOGWOOD—DO YOU KNOW IT?

Whenever there is a scarcity of the drugs ordinarily employed and American physicians cast about among the native plants for resources therapeutic, one of the first to be utilized is the dogwood, *cornus florida*. During the Civil War, the bark of dogwood was found quite effective in combating malarial fevers. However, when the conflict ceased, the crude preparations in vogue were unable to hold their own against quinine and soon ceased to be employed. Possibly if cornin, the crystalline active principle of dogwood, had been extracted and supplied relatively as cheaply, the verdict might have been different.

According to Lloyd, *cornus* is tonic, astringent, and slightly stimulant. The specific indications named for the administration of *cornus* are: tonic antiperiodic in intermittent and miasmatic fevers; pyrosis, quinine-headache, general exhaustion, feeble, relaxed tissues, feeble pulse and subnormal temperature; quinism.

Ellingwood also employs *cornus* for atony of the gastrointestinal glands, finding that the drug increases the appetite, improves digestion, and relieves the drowsiness and dulness attending imperfect digestion. Intestinal digestion also is enhanced by it.

This writer for many years has employed *cornus florida* as a tonic for the erectile

tissues. It is a true tonic, somewhat slow in action, but enduring in effect. The extract should be given in doses of 4 grains before each meal, best dissolved in water to secure the tonic action upon the stomach also. It should be continued for, say, a month.

The results of its use have been so decided and so satisfactory that it is evident that we have in *cornus* a remedy of value, too great to warrant its present neglect. Nor is it to be confounded with other bitters as simply one more tonic; it has distinct and peculiar properties of its own.

The difficulty lies in the want of a modern preparation. We have become so accustomed to the conveniences of quinine that even our elixirs and other preparations of "cinchona" now almost universally are prepared from the cinchona alkaloids. We scarcely can ask our patients to take the crude and nauseating fluid extracts, after their having been educated to pleasant and, yet, effective small-dose medicines.

Will not some wise and enterprising manufacturer start the ball rolling and put in our hands a pure alkaloid *cornine*? It is the psychologic moment for a new and rational native-American movement in the drug-world.

A FEW REMARKS ABOUT GOUT

A Kansas City man, T. W. Schaefer, declares that we must drop our old ideas about gout and adopt something more in accordance with present-day knowledge. The absurdity of attributing this malady to uric acid is evident on considering that a Gram (15 1-2 grains), of this acid requires 7680 Cc. (or 256 ounces) of water to dissolve it.

Alkalis and diluents are aimed at the symptoms and not at the disease. The exclusion of proteids from the diet is a questionable expedient. The use of lithia and alkaline mineral waters is of undoubted great benefit to the purveyors.

Schaefer attributes the malady to a disturbance of the nutritional balance, owing to a slow, long-continued intoxication, really caused by chemical irritants, in the form of ptomaines or toxalbumins, absorbed from the digestive canal and thus giving rise to the toxicogenic symptoms characterizing gout.

"There is constipation, the tongue is coated, and fermentative changes occur in the intestinal tract, giving rise to constitutional absorption of the products of decomposition. These products are not uric acid."

Gout is associated with obesity, and this with sterility. Some uteroovarian complaints seem to exert a strong etiologic influence in creating the symptom-complex of the disease. Uric acid is a derivative of purin and xanthin; to this group belong uric acid, guanine, adenin, hypoxanthin, heteroxanthin, paraxanthin, caffeine, theobromine, etc. Of these, some exist in plants: peas, beans, asparagus, oatmeal, and onions contain much; some are products of animal metabolism; and some may be produced synthetically. Meat-bases are closely related to the caffees, being purins. The evidence against them is not enough to convict them of inducing gout. Uric acid is nontoxic when taken internally.

The affections grouped under the gouty diathesis are all from faulty metabolism. The relation is intimate between the gastrointestinal toxic products and serious disturbances of general health. Many nervous and mental diseases are now attributed to intestinal putrefaction. Neuralgia at present is treated by giving cathartics. Fecal toxemia deprives the red blood-corpuscles of their resisting power.

Intestinal diseases kill our domestic animals; dogs, cats, horses, cows, and we ourselves are slowly poisoned by food. Advancing years display slighter resistance, the tissues are weakened because of feeble and tardy elimination; the fecal toxemia opens the door to the microbic invaders that occasion infection and decay.

Colonic diseases increase the tendency to stasis; the large intestine "is a veritable sewer of filth or cloaca of the body." Paroxysmal febrile attacks brought on by fecal toxemia may mimic malaria and deceive the physician. Others resemble typhoid fever, hepatic abscess, and other obscure, complaints.

On the other hand, witness the juvenility, the alertness, the activity, mental and physical, of the aging man who takes care to keep his sewers clear, his bowels free. People stop and look after him in surprise; they ask how he manages to keep from growing old; why he walks with the quick, springy step of youth?

Don't waste time convincing the grouch—give him a pill.

Don't bother to sympathize with the melancholy; try podophyllotoxin.

Don't pull out your check-book to help the unfortunate whose business is going to the dogs; take him around to the pharmacy and treat him to a dose of some effective saline aperient.

Colchicum—which being translated into 29th century prose means colchicine—is useful for gout? Surely it is; but turn back several centuries and read how our wise old observant ancestors said: "Give the meadow-saffron until it acts freely upon the bowels."

Oh, if I were King of France, or, better still, Pope of Rome,

I'd have no fighting men abroad, no weeping maids at home;

All the world should be at peace, and if kings would show their might,

I'd have them that make the quarrels be the only ones to fight.

WHAT IS THE MEDICAL IDEAL OF MANHOOD?

The wide exploitation that nowadays is being given to the subject of eugenics very naturally suggests the question as to what combination of qualities really does constitute the ideal of manhood from the medical point of view; a rather important question, it must be admitted, in view of the avowed crusade which modern medicine and its allies have undertaken to bring it to pass.

Such an ideal can not, certainly, be the production of a race of perfect animals; for, that would place medical science in the anomalous and hopeless position of antagonizing the march of evolution and of attempting to annul the animal kingdom. And, besides, the reduction of the race to a dead level of physical perfection, even if that could be accomplished, would not be a net gain to humanity. The fact is, the bulk of what are called entirely healthy people add nothing to the sum of human achievement, and a reduction of all types to one solid uniformity of what is called health would have the effect of depriving humanity of precisely those individuals who have added most to the beauty and variety of human existence.

Nevertheless, the function of modern hygienic medicine is concerned with the physical side of life, all latter-day fads and theories to the contrary notwithstanding; and with its other phases—the economic, sociologic, psychic, and other aspects—only as they bear upon the physical.

As a matter of fact, the medical ideal is the production of a race of men and women who shall be best fitted to endure, for the longest period and with the least physical reaction, the stresses and exactions of modern life. Longevity is an element in the ideal; so is working-efficiency; so is sanity and poise; and so are a dozen other conditions; all of

which will, in individual cases, vary their proportional values, but will give a net resultant of *mens sana in corpore sano*. The medical standard, in short, is nothing more nor less than normality.

Whether this ideal admits of anything like standardization is very questionable. It would seem as though the growing complexity of civilization and its demands rendered such a standard increasingly impracticable. Whether any general formula can be handed down for its attainment is equally doubtful. It is more reasonable to believe that the efforts which are directed toward its realization must, like those which are directed toward the cure of disease, be more or less "symptomatic," that is, governed by the conditions surrounding each individual case, or at least each group of cases. What may be health for the miner may be quite other for the bank-clerk; and similarly for other planes of life.

And, finally, medicine should not lose sight of the fact that its own ideals of health, after all, do not play any great part, if any, in the real progress of mankind. The medical man, so to speak, walks in the rear of the procession, picking up and caring for those who fall by the way, and shouting frantic admonitions to the impetuous ones at the head of the march—admonitions that scarcely are heeded, and which, indeed, for the ultimate good of the race, it is well shall not be too seriously heeded.

No physical ideal, no health-crusade that interferes with the higher ideals and crusades of humanity ever will impress themselves upon the world at large. Yet must medicine forever persist in promulgating the doctrine of physical fitness and be content to play the part of trainer in the camp and of second in the ring.

WHAT ADVANCE IN ANESTHESIA?

The subject of anesthesia *seems* to remain, from year to year, *in statu quo*. In spite of the wonderful improvements made in the last ten years in the preparation and methods of spinal anesthetics, it does not seem as if the spinal method had gained much favor or received very wide adoption; and the inhalation of ether and chloroform, in some combination or other, varied here and there by nitrous oxide, still appears to hold its place as practically the universal anesthetic.

Nevertheless, the tide really is turning, however imperceptibly, against general inha-

lation anesthesia; and there have occurred, in the past few years, several significant modifications in the surgeon's attitude toward chloroform and ether. We are beginning to understand that there is more in the matter than the mere technic of administration, or even than the considerations of cardiac and respiratory dangers during such administration. We are realizing that the introduction of these vapors into the blood has a chemical-physiological action which carries its own peculiar menace, and we are becoming more and more cautious in our employment of them.

Nowhere is this modification more apparent than in our position on the question of chloroform in obstetrics. This subject has passed through two distinct stages and has now well entered the third. At its first suggestion, the great majority, even among the profession, stood aghast, and offered all sorts of grave objections, physical and moral, to its adoption.

Gradually, however, the thought won its way, and then sentiment swung to the other extreme. Why should the parturient woman be denied so simple and obvious a means of robbing childbirth of its terrors? Harmless and effective, it was a boon to which every woman was entitled, and the physician was cruel to withhold it. And, so, for a long period, the chloroform-bottle and mask formed a routine part of the obstetrician's outfit, and the welcome anesthetic was administered with a light and airy insouciance.

Today the situation again is noticeably changed. From every experienced and authoritative quarter we hear warnings against the use of chloroform in the lying-in room; not because of any rediscovered dangers in the process of administration, but because of our recently acquired knowledge of the hemolytic action of the drug. It is the same specter which, lurking in our minds, impels us to the search for other means of surgical anesthesia. For this more sensible view of the matter, we are largely indebted to the comparatively recent science of hematology.

The purely spinal modes of anesthesia thus far offered, despite the enthusiastic claims made for them from time to time, have not justified themselves, and are, properly, regarded as impracticable and now all eyes are turned toward the so-called psychic anesthetics—the "twilight sleep." Wide popular interest has recently been aroused in the subject by the exploitations of the lay press, and the whole country is expectantly watching the tryout of the "daem-

menschlaf" in certain hospitals in New York and elsewhere in the conduct of labor.

We flatter ourselves that with our readers this mode of anesthesia has long since passed the tryout stage; they have been successfully using it, in an unostentatious way, for several years. We, therefore, speak of the matter here not, indeed, for the purpose of bringing hyoscine and morphine anesthesia to the attention of our readers—that would be carrying coals to Newcastle—but to point out that slow-moving public opinion is at last definitely turned in the way that we and our friends have been pioneering for years. The tide now evidently has set in this direction, and we cherish the hope that the present year will see a marked advance along this road.

A child's kiss

Set on thy sighing lips shall make thee glad;
A poor man served by thee shall make thee rich;
A sick man helped by thee shall make thee strong;
Thou shalt be served thyself by every sense
Of service which thou renderest.

E. B. Browning.

THE WAITE BILL

Woman has at last revolted against her femininity. She has examined the system of nature, and pronounced it wrong. She considers the social contract, and declares it unjust. For all these centuries, she has met man, had her brief riot of delight, strolled with him for a season in the garden of love, and then the beloved man has gayly hied him off to fresh scenes, to the chase, to warlike emprise, to other gardens with other girls, perhaps, while leaving her to bear the consequences of dalliance, the shame, maybe, the suffering of parenthood, and too often the burden of support for the fruit of their joys. Now she demands a more equitable arrangement, and Dr. Lucy Waite, of Chicago, has camped on the trail of our Illinois legislature, with the avowed intent of remaining there until her bill is enacted into state law.

In brief, this bill provides that the birth of a child shall automatically wed the parents, provided neither is already married. Further, the putative father must, within three months of the child's birth, file an affidavit as to his fatherhood, under penalties for neglect; and the mother or nearest friend may bring his dereliction to the notice of the state's attorney. If the jury decides that the accused man is the father, he is mulcted with a fine, and pronounced legally wedded to the accusing mother.

It is asserted, in connection with this effort, that from 3000 to 6000 illegitimate children are born in Illinois every year.

Nothing is easier than to see faults in things as they are. To youth, glorious, capable, energetic youth, it pertains to see the wrong, and furiously to assail it, until ancient abuses are done away with, old wrongs are righted, and the bad old world betakes itself to soap and water, and shows up with face shining and clean—for the time. But the passage of years brings about the same old experiences, and one has to ask whether in the end any real benefit has been attained. For, we learn in time that there exist deeply buried reasons for the things that are, and that any disturbance occasions rapidly widening circles of agitation extending very far beyond aught that might have been anticipated.

One of the best examples of this was furnished many years ago, when Russia attempted to deal ideally with the problem of the illegitimate child. Russia opened a home for foundlings so well arranged that the mothers could leave their infants there, with no possible exposure. The child was taken in and a wet-nurse provided; and that the nurse should be relieved of all need of work or worry, her pay was so large that she was lifted out of poverty, was well supplied with nourishing food, had plenty of rest, and could devote herself exclusively to the care of the child. In fact, her position was made so desirable that the maidens of the vicinity devoted themselves assiduously to the business of becoming mothers; then they left their infants at the institution, came the next day and applied for positions as wet-nurses, received their own children, and were supported in luxury and idleness thereafter, until the children were old enough to be taken off their hands and replaced by new ones. The result to the morality of the district may be imagined.

Take this proposed law as represented by Doctor Waite: With the fundamental idea that the father should take his full share of the obloquy and stand his full share of the expense incident to child production, we are all agreed, of course. But, how is this to be accomplished? How is his paternity to be proved? Is it safe to accept the mother's word in every instance? Does the woman always know? It is said that a Frenchman once, when selected as the putative father of a child, remarked that "when one sat down on a basket of thorns it was perhaps difficult to decide which thorn wounded the sitter." Does not this aspect open a vista of unlimited deception and blackmail?

When the Titanic disaster made young Astor the greatest financial catch in America, he received hundreds of letters from women proposing marriage. Put the Waite proposition in the statute-book, and any of these women who could secure or pretend motherhood by the young man, would be married to him and enjoy his millions. What a race there would be, to see which could "beat the others to it." Suppose two, or a dozen, got in line; what a trial of methods to induce premature delivery of yet viable infants, as the first child born won the prize!

No bachelor would be safe; and the more eligible or desirable, the more certain he would be to fall before the wiles of the adventuress.

Any normal, healthy, young woman wants to be a wife. What about legally empowering every woman to get a husband by the easy method of becoming impregnated and bearing a child? The door to immorality opened by the Russian foundling asylum would be narrow, indeed, beside the portals thrown wide by the Waite law proposed.

These remarks are not based upon a reading of Doctor Waite's proposition, but upon the account of it given in the press. It may be that the proposed act contains provisions to obviate the objections cited, but we fear this is not possible, and that the inevitable consequences of any such law would be such as to render it impracticable. Nevertheless, the evil it seeks to reach is so great that there should be some way of coping with it; and the discussion of Doctor Waite's proposition may bring to light a feasible plan.

Sympathy with pain is not the highest form of sympathy. Anyone can sympathize with the sufferings of a friend, but it requires a very fine nature to sympathize with a friend's success. Sympathy with joy intensifies the sum of joy in the world. Sympathy with pain does not really diminish the amount of pain.—Oscar Wilde.

XANTHOXYLUM—PRICKLY-ASH

The war has interfered seriously with our supply of many drugs, and especially those most largely employed in practice. This has had the effect of diverting attention to the drug-plants of America. The Department of Agriculture has, for years, been attempting to direct interest toward the cultivation of the more valuable of these, and with some success. It is to be hoped that the present conditions may favor this very desirable object.

It does seem unwise for us to pay a war-tax of 200 percent advance on dandelion root, when every lawn is infested with it. It

has always seemed absurd to pay 40 cents a pound for the quarter-ton of burdock-root we import annually from Germany, when it is to be gotten from every farm and roadside in the country.

The main reason why we do not use native plants is, that we—some of us—know very little about them. Yet, whenever any of these has been introduced, it has made friends. Among those that have won the commendation of quite a number of American clinicians is *xanthoxylum*. One of my colleagues values the bark of the prickly-ash so highly that it enters into the composition of nearly every prescription he devises.

Xanthoxylum is a shrubby tree found all over the United States, although in the South the official *xanthoxylum americanum* is largely replaced by an allied species, *xanthoxylum carolinianum*. Only one of the group of alkaloids of this genus has been separated, and this has been identified with berberine. There are qualities in *xanthoxylum*, however, that can not be explained by anything that has ever been found to attach to berberine.

Lloyd attributes to prickly-ash the powers of a stimulant of the nervous and circulatory systems and of the secretions. It is a powerful sialagog, increasing gastric and intestinal secretion, as well as the bile, pancreatic secretions, urine, perspiration, and mucus from all the mucous membranes. It also hastens the pulse slightly. It is emmenagog and carminative, and the berries are antiseptic, according to the same authority.

Its field has been the so-called rheumatic affections of the muscles, that is, myalgias, lumbago, torticollis, pleurodynia, and so on; as a nondebilitating eliminant for debilitated subjects, as in syphilis and scrofula; as a gastrointestinal tonic in atonic dyspepsias, catarrhs, costiveness, flatulence, catarrhal and malarial jaundice, spasms of the bowels, colics, and the choleras; in the declining stages and convalescence from dysenteries. King used the berries in Asiatic cholera; the bark in atonic diarrheas, typhoid conditions, and the tympanites of choleras. It has been employed in association with diuretics and tonics for dropsies, malaria, and functional dysmenorrheas.

As a stimulant of the nerves, *xanthoxylum* has been given in nervous prostrations, hemiplegias, locomotor ataxia, and all varieties of vital depression. It is said to relieve pain along the front of the thigh, after-pains accompanied by dorsal or sacral suffering, and the neuralgic pains of anemic and deli-

cate persons. By overcoming capillary stasis, it sends to the surface the rashes of the eruptive fevers, especially if retrocedent.

This bark is credited with an interesting local action. When there is present the dull pain of peridentitis and toothache, chewing the bark gives relief, as it does also in glottic paralysis, facial neuralgias, and paretic conditions of the larynx and pharynx.

The specific indications, according to Lloyd, are: Small doses for hypersecretion from debility and mucous relaxation; large doses for nerve atony, the capillary engorgement of the exanthemata, sluggish circulation, tympanites, gastrointestinal torpor with scanty secretion, dryness of the mouth and fauces with glazed, glossy surfaces, flatulent colic, true cholera, uterine cramps, and neuralgia. For painful bowel affections, the berries are said to be preferable.

The bark is considered stimulant, tonic, alterative, and sialagog, the berries, stimulant, carminative, and antispasmodic, acting especially upon mucous tissues. The difference probably is ascribable to the presence of a volatile oil in the berries. Whatever specific virtues xanthoxylum possesses it owes to a principle contained both in bark and berries.

In studying this drug ten years ago, the writer said: "An agent that will stimulate the mucous secretions throughout the body, without nauseating or depressing, is of considerable interest and should receive numerous applications. Since that time it has received some attention, as being one of the ingredients of the Towne-Lambert remedy for morphinism. Here, this very property comes directly into play, to counteract the influence of opium in checking secretion and in eliminating from the body its stored toxins.

Xanthoxylum is a remedy for chronic states, as it is slow in getting to work, and the tonic effect it exerts upon the mucous membranes is slowly developed. Hence, it is best given in moderate doses, at long intervals, and to be continued for at least a month before one decides what its effects may have been.

Despite the latter-day tendency toward mergers and combinations, this writer is a believer in individualism. There is room for any man, doctor or druggist, who has leisure, to take a single plant, the one that flourishes best in his immediate neighborhood, and make of it his own specialty. Cultivate it; ascertain the best varieties and treatment to develop its powers; the best preparation that may be made; and market it, and it

alone, as your own personal work, your contribution to the profession and to humanity. This has been done in several instances, and thus, veratrum, passiflora, viburnum, helonias, aconite are associated with the names of men who at least have made these plants familiar to us by their advertising. Whether they have been equally solicitous in the scientific part of their work, we leave to them and to those who utilize their products.

ÆSCULIN—HOW USE IT?

The recent announcement that there is reason for the belief that the veins possess a set of vasoregulatory nerves of their own, distinct from those governing the arteries, brings into prominence the question of remedies influencing the caliber and tension of the former vessels. Judging solely by clinical observations, many practitioners have claimed for certain remedies the power of acting upon the veins; and when many concur as to the powers exerted by a drug it is at least worth our while to give the suggestion a trial—especially when we have nothing else upon which to rely in that condition.

Many a man has carried a horse-chestnut in his pocket as a remedy for hemorrhoids, without analyzing the possibility of its efficacy. The bark of this beautiful native tree yields about 2 1-2 percent of æsculin, a bitter glucoside. In the galenic preparations, it is associated with other principles—example, saponin—by which it is masked and its effects so modified as to render them too uncertain for practical application. The glucoside itself is now to be had commercially and it has been studied quite carefully.

Æsculin is credited with the virtues of a bitter tonic, especially relieving chronic capillary relaxation. The evidence points to a tonic action on the veins, rather than on the arterioles. It has proved useful in abdominal plethora, visceral neuralgias, general vascular fulness, soreness and throbbing with malaise, uneasiness, fulness and aching in liver, rectal irritation, and hemorrhoids of the large, purple form without bleeding, sphincter spasm, and itching, heat, pain or uneasiness in the rectum. Rectal reflexes also are relieved by it.

Being a remedy for chronic conditions, æsculin should be administered in small doses and continued for long periods. A grain a day, in divided doses, usually gives satisfactory results. If this proves ineffective, a grain daily may be added each week until the effect is manifest.

Leading Articles

The Treatment of Typhoid Fever

With Special Reference to Elimination

By V. E. LAWRENCE, M. D., Ottawa, Kansas

EDITORIAL NOTE.—Every reader of this journal who had the privilege of going through Doctor Lawrence's fine article on "The Treatment of Croup," in our December, 1914, number will read the following article with equal eagerness. The Doctor has original ideas that are helpful to every physician.

PRIOR to 1798, when Dr. Edward Jenner announced his discovery, or, rather, invention of vaccination, the index of diseases contained the names of many maladies that proclaimed themselves invincible, and before which the medical profession bowed in humble acknowledgment of its inability to retard their onward progress. Shakespeare's statement that "death hath ten thousand various doors for men to take their exit" was lamentably true.

Jenner was the first champion to block one of these doors, and other notables have followed, until now the exit by way of hospital-gangrene, septic infection, yellow-fever, hydrophobia, tetanus, diphtheria, and membranous croup are so effectively blockaded that the enemies approach their professional opponents with more than an even chance of defeat.

From time immemorial, King Typhoid has held, almost unchallenged, his declaration that *he* is the *really* invincible one. His citadels have been attacked in all ages and by all methods, but he holds the record, until of recent years, of unbroken conquests. It has been his proud distinction to have had for his conquered subjects the brightest lights of the medical profession. For all these years, the best medical authorities have unqualifiedly declared that not only is he invincible, but that his progress cannot even be successfully retarded; that it is folly to advance against his forces and that all that can be done is, to fortify the organs of the body against his attacks and to hold the fort as best we can, until the victim becomes his prey or he withdraws from sheer exhaustion. Yearly, in the United States alone, between 45,000 and 50,000 persons in the prime of

life, and many of them in the vigor of youth, become his prey. He is almost the champion enemy of human life and outside of tuberculosis is the champion victor.

It is now some months since the managing editor of this journal requested me to contribute an article upon the treatment of this disease. My views (and my experience) on its treatment have been so radically different from those generally accepted by nearly all the leading text books, and by a preponderating majority of physicians, that I have hesitated to present them, because of a natural diffidence in differing with men of eminence and reputation in our profession; but, believing that it may be useful, and hoping to remove from the minds of at least some practitioners and their patients the dread with which they attempt a defense against this disease, I have concluded to respond to the editor's request.

How the Idea Was Evolved

My twenty-five years' experience in writing upon the differential diagnosis of diphtheria and membranous croup, and on the curative properties of the dark iodide of lime in the latter, have taught me that a narrative of the steps by which conclusions are arrived at is the most decisive means of convincing others of the accuracy of such conclusions.

For this reason, I will recite the steps which gradually led me away from the belief that typhoid fever is an invincible disease and thence to the conclusion that among the diseases attacking mankind it, in reality, is one which most surely responds to proper treatment, and, moreover, is the least dangerous among all the dangerous diseases. And, furthermore, that there should follow from an

attack of typhoid fever very few, if any, pathological conditions; by which I mean that there should be almost an absence of the dangerous anatomical conditions and the septic infection which make the disease so fatal to human life.

It is now twenty years since I located and began to practice in this little city. In the fall of the same year, I had under treatment my first case of this disease after locating there. The patient was a young man living in the country. The weather was hot and the roads were dusty. The attack was an active one and the patient soon manifested most of the dangerous and alarming symptoms so often seen when the disease is allowed to follow its own course. He received the best treatment recommended by the best authors. Every effort was made to conserve and improve his strength. Every means of which I was cognizant, calculated to enable every organ to perform its functions and resist the attack, was employed. Still, the patient went down into the valley of delirium and emaciation, and exhibited all the other familiar symptoms except alvine hemorrhage.

Five weeks of this found my man a shadow of his former self. Then the high fever, culminating in crisis, left him in a shattered and exhausted condition, although with the usual chances of a more or less dangerous convalescence. I discontinued my visits after giving the usual directions and admonitions.

Two days after that, I was summoned 150 miles distant, to see a patient at my former home. Upon returning, thirty-six hours later, I was informed that a fatal hemorrhage had carried my patient away during the previous night.

While previous failures to save other patients had been a source of disappointment, this one produced in me the first sensation of absolute defeat and discouragement. The disheartening acknowledgment on the part of the medical profession of its inability to modify the course of typhoid fever, dating back to the earliest history of the malady, together with the high mortality and the altogether uncertain results of even the best-known treatment, brought me nearly to the determination no longer to accept typhoid-fever patients.

About this time, the typhoid bacillus had been discovered and a few doctors began to believe that something might be done to retard the progress of the disease and ameliorate the dangerous conditions resulting from its unopposed march.

I spent the following year in gathering together what little was said by the two or three men who wrote upon the subject.

With this information to guide me, I arrived at the conclusion that, since without exception the intestines were the primary seat of the enemy, *active elimination* (purging) and intestinal antiseptics ought to prevent invasion. Accordingly, I marked out a line of treatment, with these conditions in view.

At that time knowledge regarding intestinal antiseptics was very meager, indeed. I believe nothing had been written about the sulphocarbonate of zinc, and at first I knew nothing of this salt, but used the arsenite of copper and one or two other antiseptics—now known to be less efficient than the zinc salt. Further, so far as I am aware, no one had written upon or put emphasis upon alvine elimination. However, thought upon the matter convinced me that intestinal antiseptics without simultaneous active elimination could but partly succeed. Also, that the contents of the bowels, together with the typhoid germs, must be flushed out—and actively and completely flushed out—and that this flushing must be continued *throughout* the disease. It grew upon me that, with the bowels more or less filled with infected feces, the disinfectants had but a poor chance to perform a gigantic task, while by *thorough* elimination their task would be greatly diminished and their opportunity to reach all parts of the alimentary canal much increased. It became clear to me that intestinal antiseptics was but one step in the right direction, and that not alone was elimination an important, but a much more essential one, and that the two measures combined ought to comprise an enemy which this heretofore invincible disorder would be unable to resist. Under such treatment absorption should be materially diminished and ulceration prevented.

The textbooks have always warned against the use of even mild laxatives, assuring the physician that the patient soon would be jeopardized by an active diarrhea, and that, to ward against this, astringents and opiates must be prescribed.

I can call to mind no more fatal error on the part of the profession than its failure to realize that this diarrhea actually is caused by the presence of the infected contents of the bowels and that this flux is nature's effort to rid herself of the cause of intestinal ulceration and the destruction of Peyer's glands; that nature was crying aloud for an early and efficient cathartic. It is nature's index which

for a thousand years the doctors have failed to read and interpret.

Successful Test of the Theory

It was not until a year after my first case that a second typhoid patient fell into my hands. A young man of twenty-four had gone west to assist his brother in the harvesting. Unluckily, an epidemic of typhoid fever was prevailing, and the physician of the village lost 17 patients. This young man also fell victim, and as soon as the attack was diagnosed he returned home and became my patient. A friend, his fellow workman, remained there and died of the disease.

I had seldom seen a case more fully developed at the first visit. All the symptoms were prominent; the evening temperature was 105° F. Forgetting—ignoring—everything I had learned as to the manner of treatment, I furnished the family with a pint of saturated solution of magnesium sulphate, and ordered a series of doses (stirred into a glass of hot lemonade—which almost entirely disguises the disagreeable taste), to be given every three hours, until not less than six active movements of the bowels were obtained during the next twenty-four hours. Through a misunderstanding the man's sister had doubled the dose, and reported, to my surprise, that the patient had had not less than a dozen passages during this time. I felt slightly uneasy about this. Still, upon examination of the last stool voided and noticing its foul odor, I concluded that such offending stuff could not be gotten rid of any too soon.

No doubt this statement will be startling to those who have avoided cathartics and feared the least evidence of activity of the bowels. To understand why this patient was not hastened to the grave by such bold violation of established precedent, it must be realized that all hemorrhage comes from ulceration of the intestines and Peyer's glands; that this ulceration is caused by the septic contents of the bowels; and that hemorrhage is not possible if the putrid, infected contents are removed before having had time to produce ulcers. Of course, all but the mildest laxatives are to be avoided should the patient fall into the hands of the physician after sufficient time has elapsed to permit of the ulcerative process. However, this is not the case when the doctor is called at the usual time.

To continue my story: Directions were also given that the patient should drink one pint of boiled water hourly. Also, that the intestinal antiseptics must accompany the

water. No attention whatever was given to any of the symptoms, and no effort was made to enable the patient to withstand the oncoming attack of the disease. And this simple treatment was continued unchanged throughout the illness, except that the bowels were caused to move about four to five times daily thereafter.

The patient progressed about as follows: No change occurred for the first three days. Then all the symptoms began to diminish in severity; also, the patient remarked that he felt better and asked for the milk and buttermilk, which before had to be urged upon him. The story can briefly be concluded by saying that from this time on the disease fell completely into the hands of the attending physician—as, indeed, is true for all cases since then. Its retreat was gradual, and its total disappearance occurred on the fourteenth day. There was no sign of delirium or of hemorrhage and the patient developed no symptoms at all alarming. His convalescence was so short that he was out of bed almost the first day after the fever left him.

Adoption of the Sulphocarbolate of Zinc

This was twenty years ago. Soon after that I began to use the sulphocarbolate of zinc as an intestinal antiseptic, and I believe it is the best. I prescribe it in 5-grain doses, hourly, together with the water. I am careful to be sure that it is chemically pure—an impure article will annoy the stomach. Usually the patient swallows the tablet whole; some prefer it dissolved. Boiled water will lose its taste of flatness after standing twelve hours. The water should be boiled not less than fifteen minutes.

I insist upon the patient drinking as nearly one pint of water hourly as he can. Some have little trouble in doing so; others cannot drink that much. At first, all complain of a feeling of fulness. This, however, passes away in two or three days, as the kidneys and bowels respond to the demands made upon them by the water. The epsom salts is continued. If either the water or the saline laxative is neglected, improvement of the patient ceases.

Experience soon taught me that my typhoid patients needed no heart or any other tonic and that the organs performed their offices without assistance. Occasionally I have added a 1-4-grain calomel tablet. It will be found that, instead of having diarrhea, increasingly large doses of the saline are required to obtain the desired number of movements.

The zinc sulphocarbolate should be continued for about a week after recovery, as a preventive against a return of the bacteria, but in less frequent doses. [Our experience is that, in the average case, best results are obtained with the combined zinc, sodium, and calcium sulphocarbolates; when decided astringent action is desired, then the zinc salt, alone, is indicated.—En.]

As to diet, there is no necessity for the care usually taken. Fresh milk or buttermilk are applicable. The white of eggs may be stirred into lemonade. Beef, finely chopped, may be given raw, and seasoned to suit; or, if the patient prefers, it may be molded into flat cakes and quickly and lightly cooked upon a hot griddle greased just enough to prevent sticking. I am in the habit of recommending lemonade, as desired, instead of plain water; also plenty of orangeade. Feed often, but in small quantities.

As to diagnosis, I will add that during recent years the blood of all patients has been subjected to the Widal test and all gave the

characteristic reaction, except one. The percentage of fatalities under this treatment has been 3-4 of 1 percent. No uncomplicated case has failed to make a good recovery and none developed dangerous symptoms. There has been an almost complete absence of delirium, and only two had hemorrhage, and they only just enough to be detected.

It must be remembered that the treatment of all diseases is a contest for supremacy between the disease and the remedies and that there are times when either may predominate. So in this treatment of typhoid fever. There are times when the fever will assert itself and even may increase. At this juncture, the physician must not lose faith in his remedies, but continue them in even increased dosage. The remedies will, in due time, gain the ascendancy.

These twenty years of experience have convinced me that the general adoption of this plan of treatment would reduce the fifty thousand fatalities to about one-tenth this number.

The Untrustworthy Galenicals*

By HENRY BEATES, JR., Philadelphia, Pennsylvania

UPON the broad principles of the law of cause and effect it may be affirmed that either like causes produce like effects, or that causes are followed by effects which, upon analysis, demonstrate the character or nature of the cause. Other things equal, it may be stated, therefore, that like causes produce like effects.

We have exemplification of this truth in the series of phenomena designated acute croupous or lobar pneumonia. The diplococcus of Friedlander, or pneumococcus, having gained entrance into the human economy, under suitable conditions evolves a toxic principle that causes the well-known phenomena: a severe chill, occurring as a rule during the night, thoracic oppression, dyspnea, rapid temperature rise, intense frontal headache with its accompanying suffusion of face, rapid pulse, short, dry, painful cough, and an expression of distress and anxiety—which indicates the apprehension the victim experiences from the profound systemic toxemia of which the pulmonary symptoms are but a minor feature. We know that this toxic product possesses an especial affinity for the endothelial elements and their basement

membrane, which compose the air vesicle, and that the effect of this toxin is to cause to transude from the ultimate ramifications of the pulmonary artery, into the air vesicle, that peculiar coagulable exudate which gives us the so-called stage of red hepatization.

Knowing the pathological processes characteristic of this diplococcus toxemia and the effects which the symptom-complex proves, we have a demonstration through an analysis of these effects of what the cause of the malady is. Does contemplation of this illustration of cause and effect alter the point of view of the clinician when therapeutic procedure is a presenting problem?

When we know that pneumonia and pneumonitis are not synonymous terms, but that pneumonia is a systemic diplococcus toxemia, is there not cause for a more intelligent and masterful plan of treatment? Harrington Sansbury, in his *Principia Therapeutica*, sets forth in the prologue a governing fundamental principle that should underlie all therapeutic art, in the following words:

If it be true, as Plato, the master thinker, has said, that "an unexamined life is not worth living," then it must follow, since the greater contains the less, that an *unexamined practice is not worth practicing*. It is for this reason, and because we are in peril of being engulfed in the ever-rising flood of

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new remedies, that I have ventured to set down certain considerations, in the hope that they may prove of service to those who have undertaken to navigate the ship of health.

There are those who make light of general principles, knowledge of details their sole demand, but this point of view sees one side only of the shield, be it silver or gold as it shall please them; for whilst doubtless general principles without detail make but a foolish business, it is no less true that details without guiding principles yield but a busy foolishness. In default then of principles to guide, our ship of health is likely to find herself on a lee shore, in a welter of contending elements. We know that, in the main, the lines of the ship are good, likewise the materials, unless misfortune or deliberate misuse have befallen her, we know that she is built for the great waters and the "enlarged winds," even if she be not so built as to defy shipwreck. We know also that the adventure of the voyage must be made, and made singly though we put to sea in fleets, and, further, that not generalities, nor averages, will here avail, but *individuality alone*. This being so, our first care must be to make ourselves acquainted with the seaworthiness of the craft we have to captain. Upon this knowledge everything will depend in the hour of danger. When it is imperative that decision be taken; upon this knowledge we shall elect either to run before the wind and the pursuing seas, or, with shortened sail, and head to wind, ride out the gale.

The knowledge hereunto required is something more than of sail area and soundness of timbers on the one hand, and of force of wind and waves upon the other. *The ship of health has its own motive power within*, whose fires must be fed from its own stores. How to spend, how to economize, now with a free hand, now with most niggardly parsimony, all will depend upon circumstances, for example, whether the nearest port be within reach, or the position on the chart of life be such as to forbid the hope of any shelter till the storm be spent.

In this problem, the composition of forces is complex to a degree, and the Science of Medicine very far from its solution, but by as much as it is thus distant, it makes room for the Art of Medicine. This art, we are told, is long, but something of the journey has been accomplished, and something garnered by the way, and the injunction is laid upon us, *not to forget, not to pass by, not to misuse the stores of experience and of knowledge thus laboriously acquired*.

Two Types of Practice

Examining, then, medical practice is seen to consist of two principal types, preventive and curative, and to the latter space necessarily confines us.

Curative medicine is based upon sound knowledge of structure and function, anatomy and physiology, and, of course, on those fundamental phenomena that underlie the actions of respective structures or organs as well as of their relationship one with another. It is this relationship of function with function as controlled by organ and organ, that the much neglected principles of "physiological equilibrium" or balance is maintained. Such equilibrium or balance is health. Their char-

acteristics seen in the numerous manifestations of functional activity, demonstrate one complete and acting whole, of which each individual is an exemplification. The persistence with which the equilibrium or balance is maintained confronts us with phases of physiological equilibrium, which it is impracticable for us to touch upon here; suffice it to state that knowledge does exist of the fact, that when the equilibrium is disturbed by this or that toxic principle, the right or proper administration of medicine will, in a very large proportion of instances, restore equilibrium.

Thus we face the subject, and from a necessarily limited aspect, that of the galenicals. We first find these preparations official, next that this *materia medica* has a closely related pharmacopeia, which is the standard work or authority that directs how to prepare the sixty-four tinctures. Before examining these galenicals, permit allusion to another fact associated with physiological equilibrium, and that fact is, that when a disturbed equilibrium is restored it remains so indefinitely. Do not overlook another very important fact, to wit, that no matter how profoundly physiological equilibrium may have been disturbed, the cells, tissues, or organs affected tend to recover balance. This is another manner of expressing or defining *vis medicatrix naturæ*.

Restore Physiologic Equilibrium

Empirical medicine has discovered facts of equal importance, viz., that certain medicines administered in a disturbed physiological balance unquestionably do materially aid, very positively and powerfully, in restoring balance. Do not overlook the fact previously noted, that when physiological equilibrium has been restored, *it very commonly remains restored*. Illustrative of this truth is the relief of nerve pain by hypodermic injection of morphine. Not infrequently the relief from suffering which is thus so promptly secured or, preferably expressed, the equilibrium thereby reestablished, is maintained for years; indeed, indefinitely. Surely this immunity from a return of the symptoms cannot be due to a peculiar chemical or biochemical compound formed between the remedy administered and the protoplasmic elements of the nerve cells concerned. The only rational interpretation of the result is that the drug does not remain during all these years of freedom from suffering, but that the reestablished physiological equilibrium does so remain.

The well known maintenance of this physiological equilibrium which digitalis therapy

secures in cardiac and circulatory diseases illustrates the same fact, and because this vital balance has been overlooked or forgotten, some investigators have searched in vain for evidences of some peculiar biochemical compound in the excretions and secretions of patients and animals subject to treatment, and because the analysis has proved futile, the most untenable theories as to how medicines "cured" or relieved the circulatory defects have been advanced, and this to the prevention of proper treatment by those adequately informed as to facts.

These apparently irrelevant matters are brought to notice because they involve principles of mentation seriously affecting processes of conclusion regarding the use of all galenicals by clinicians, and thus are confidence and faith in the administration of medicines destroyed and therapeutic art degraded, and even too generally ignored. It is erroneous procedure that thus conditions the establishment of dogma, and founds so-called schools of medicine. Nay, more, and, what is worse, constitutes the cause of all causes resulting in the loss of confidence in the efficacy of *materia medica*.

Loss of Confidence Leads to Drug Nihilism

A little logical consideration of these briefly stated facts renders it easy to understand the unparalleled opportunities for the commercializing of innumerable "new remedies" which a thoughtless profession is only too ready to adopt in an offhand manner. The rewards of such a course are seen already in desertion from *materia medica* and the growth and development of drug nihilism.

The facts which empirical medicine have discovered, although largely incapable of being "scientifically" explained, are ignored, our idols are being cast down, iconoclasm is rampant, and charlatanism, ever alert to seize opportunity, is at the breach, and rushes in to gather and destroy.

Think of the infectious pathological processes endangering health and life that are subjected to treatments based upon the most absurd and baseless theories; how the facts of pathology are brushed aside by unprincipled and ignorant distortions of the facts of structure and function, and how, to those insufficiently possessed of honor and conscience, money gains lead astray; consider how commonly the horrible vortex engulfs the superficial and ill prepared, and finds doctors in large numbers abandoning well established standards and facts and following colors exponent of they know not what! The

fascinating fresh air, pure food, and sunlight slogan is emblazoned on their banners, and sophistry is shrewdly employed to destroy faith in the power of medicine properly administered, to relieve and cure disease.

If the *vis medicatrix naturæ* was not a stern reality, medical science and its art should not be, and the healing art should logically be regarded as vain and useless. Medicines, let it be emphasized, are realities and, properly used, are capable of restoring lost physiological equilibrium with as great certainty as their failure to achieve such a result, *if improperly administered*.

Remedies do not always effect their results by exerting locally their corrective forces and power, but by indirect processes, whereby interdependent and coordinating vital actions are set in motion, the entire human mechanism becomes involved, and thus equilibrium is restored. Again the inherent curative power, with which cells as well as groups of cells are endowed, is directly rendered active. It is the characteristic effects that give us the well known classification into, for example, sialogogues, diaphoretics, somnificants, analgesics, excitomoters, antispasmodics, oxytoxics, mydriatics, etc. When it is recalled how disease processes affect the secretion of saliva, the activity of the skin, sleep, the alteration of sensation, the reflexes, the pupil, etc., it certainly is rational to administer those medicines which experience has taught us, possess the power to correct the disturbed equilibrium of these respective functions. An analgesic properly administered relieves and cures pain; a cholagogue restores the bile functions of the liver; an inhibited kidney activity is overcome by a diuretic, etc. Thus is the *vis medicatrix naturæ* aided in effecting restoration of physiological equilibrium.

If clinicians would familiarize themselves with these facts and not be sidetracked by false gods, concentrate their intellects upon open minded study, the healing art would in the near future occupy her proper place in the esteem and confidence of suffering humanity, and find a trusting public placing within her keeping its most sacred and important interests.

Drug Variability Destroys Therapeutic Faith

These observations bring us to my theme, which deals with one potent cause of the loss of faith by the laity in medical art, as well as what is more disastrous, the loss of confidence in *materia medica* by a large proportion of the medical profession. Let us see why. The galenicals, being derived from the

vegetable kingdom, must vary in activity of effect, in the absence of standardization, with the natural variations in strength which characterize that kingdom. This fact of nature and, let it be repeated, it is a fact, well known, but too frequently overlooked or ignored, is that no two leaves, pieces of bark, rhizomes, seeds, or fruits contain a constant percentage of any active principle. No two apples, peaches, or grapes, for illustration, contain the same degree of flavor, sweetness, or sourness. Do not forget that contrary principles, as sweetness and sourness, coexist in the same leaf, seed, bark, or fruit. Think seriously of this, because the efficiency of all galenicals depends absolutely upon the proportion of the active principles contained.

Let it be emphasized that, in the absence of standardization, because in Nature there is no invariable unit of active principle in any given unit of crude drug, it is absolutely impossible to find two of any one tincture, infusion, or extract possessing uniformity of strength and, hence, of effect, in the same dose. Any galenical compounded by two different pharmacists, or any one galenical prepared by one pharmacist from two separate quantities of crude material, cannot possibly exert the same degree of action. Doses, therefore, other things being equal, must necessarily differ widely in order to secure uniformity of result. This being true, contemplate what is involved if the conventionally taught doses are adhered to, and the administration of galenicals is not intelligently supervised and modified to meet all the variations of condition; success cannot be secured by any hazardous prescribing.

The next fact to be considered is that in Nature we frequently find principles of a contrarily acting type in the one plant. Digitonin and digitoxin, veratroidia and jervia, serve to exemplify this. Contemplation of this fact may supply rational grounds for the necessary but apparently antagonistic prescription which competent clinicians at times recognize to be the best. Morphine in combination with atropine well illustrates this.

Complexity of composition, as well as antagonistic action, is well illustrated by that much administered remedy, opium. Its alkaloids present in ever varying proportions are morphine, codeine, narceine, narcotine, thebaine, papaverine, cryptopine, meconidine, and paramorphine, also meconic, thebolactic, and sulphuric acids, gum, extractive matter, glucose, fixed oils, a volatile odorous principle, and other comparatively unimportant

substances. What, may it not be pertinently asked, are you giving your patient, when you administer a dose of opium?

For a moment glance at a contrarily acting medicine, belladonna. Of the solanaceæ this group comprises *Atropa belladonna*, *Datura stramonium*, *Scopola carniolica*, and *Hyoscyamus niger*. These contain a number of alkaloidal active principles, but medicine has used atropine, hyoscyamine, scopolamine, and hyoscine. Atropine is certainly not somnifacient, but hyoscine and scopolamine are.

These active principles, like those of every galenical, vary in their percentage, therefore the question may logically be repeated, What is the patient getting when the galenicals of this group are administered? And, again, what results are to be anticipated if adherence to the conventional doses and frequency of administration obtains—twenty drops in water three times daily? Is the remedy useless, the doctor unfit, or the sufferer beyond relief and cure? One, but a less complex medicine, will be mentioned, *nux vomica*. Its active principles are strychnine and brucine and both are in combination with igasuric acid, a substance said to be identical with malic acid.

The action of a given galenical of this drug is fairly constant, and this being so, may cause the opinion to prevail that the same reliance that is placed upon this simple medicament is to be reposed in the more complex. A greater mistake cannot be conjectured; indeed, each remedy is a law unto itself.

Reasons for Galenic Variability

Sufficient has been said to demonstrate the truth of our title. These variations upon examination are discovered to differ so widely that a given quantity may be almost inert on the one hand, and approximately up to standard on the other. *Digitalis* leaves vary in price from forty cents to a dollar and a quarter a pound, for illustration, which may be one of the reasons for this very great idifference, and serve as an argument for the prevention by law of the sale of any crude drug but the best.

Another grave and most serious matter that explains the wide variations in strength and, therefore, differing results in galenical administration, is disclosed by examining into the methods of manufacture of these galenicals. Let us select the tinctures. They are made by percolation, maceration, solution, or dilution. The menstrua used are alcohol, dilute alcohol of various strengths, and mix-

tures of alcohol, water, and glycerin. Years of experience have taught the pharmacist that widely different proportions of alcohol and water are requisite completely to exhaust all of the active principles desired, without also extracting the inert and undesirable matters. In the weak tinctures for which large doses are recommended, it not infrequently happens that "the alcohol effects more than balance those of the remedy prescribed." In such, the use of the fluidextracts obviates the undesirable stimulant action of the alcohol. Some tinctures are in danger of having their active principles neutralized by the alcohol.

Alcohol mixes freely with water, ether, and acetic acid, a number of volatile oils, and dissolves resins, tannic acid, chlorophyll, the alkaloids, and balsams, while dilute alcohol extracts the gums, extractives, chlorophyll, albumin, coloring matters, resins, volatile oils, alkaloids, sugar, tannin, and many other component principles of the vegetable kingdom. Remember also that these active principles, which vary so greatly in their percentage in the crude drug, also vary widely in their solubility in alcohol, water, and the dilutions of alcohol.

When all these facts are considered, also that active principles deteriorate, and that, therefore, tinctures lose strength with age; that being kept on shelves exposed to heat, light, and atmospheric variations—what do we administer when tincture this or that is

prescribed in conventional doses, and ordered to be given at conventional periods of time—"twenty drops, three times daily, in water." Is it any wonder that what is considered eminent authority teaches therapeutic principles which are flatly contradictory? In all literature can there be found such diametrically antagonistic teaching as in that of therapeutics? We all readily recall how eminent authority has taught that digitalis is a circulatory sedative, and equally eminent authority, the reverse. Other instances will readily occur to the reader.

Further space need not be taken, for surely sufficient has been advanced to sustain the fact that galenicals, in the absence of standardization, necessarily vary in strength and activity to such an extent as to render them unreliable for use where accuracy of administration and certainty of result are to be looked for.

Surely if these facts are facts, and who dares deny, the literature of therapeutics must be rewritten. Active principles must replace the galenicals and their physiological actions determined, standardization must generally obtain, so that by intelligent use the foundations of the healing art will be securely laid, and the fact that there are agents capable of relieving and curing disease will be accepted by the medical profession, and the treatment of afflicted humanity will be based upon laws, conformity with which is essential for the highest success of the clinician.

The Nonsurgical Treatment of Cancer

By GEORGE N. MURPHEY, M. D., Paducah, Kentucky

EDITORIAL NOTE.—The average person fears the knife, even in the face of death. This is one of the reasons why nonsurgical methods of treating cancer are and will continue to be popular with the laity. But are such methods effective? This is the question which the physician asks. Doctor Murphey answers in the affirmative, and he presents arguments, facts, and results which are of exceeding interest to say the least.

IN THIS paper I shall direct attention to some methods of treating cancer that have not received the favorable recognition from the medical profession they deserve because of their importance; and I shall also prove by clinical evidence that surgery is not the only "rational" means of treating malignancy, even when the most perfect. And let me say here that I have no prejudice against any treatment of cancer that can successfully combat its ravages, be it surgery or what not. Recently I read an article, on the surgical treatment of cancer, by Dr. R. L. Ireland, of Louisville, Kentucky, and published in *The*

Kentucky Medical Journal for last August. The burden of Doctor Ireland's paper was that, emphatically, surgery is the "only rational" treatment for cancer, and, to make his argument irrefutable, he quotes Dr. Wm. J. Mayo as saying that surgery is the one "essential" means of treating this dreadful malady. Doctor Ireland did not state the number of cancers he had removed by operation, nor the percentage of cures he had made. If he has met with any marked success, however, his experience is at variance with that of some of our best surgeons, namely, Doctors Gross and Agnew, of Philadelphia.

Dr. Samuel Gross stated sometime before his death that he had amputated more than four hundred cancerous breasts and that all of these women, save one, died of a recurrence of the disease inside of three years. Doctor Agnew is on record as saying that he had removed enough cancerous breasts from women to fill an ordinary cart, and had failed to save a single life. These quotations are cited merely to show the actual results of some good surgeons in this work, and not at all to throw doubt upon the experience of anyone else.

I am surprised that the medical profession could for so long overlook the nonsurgical treatment of cancer that is in daily use by such distinguished medical specialists as Dr. A. R. Robinson, of New York, and Dr. G. Betton Massey, of Philadelphia. In 1894, while attending the New York Policlinic School of Medicine, I heard Doctor Robinson lecture on the treatment of cancer with chloride of zinc, hydrate of potassa, and arsenic.

On my return home, Bowling Green, Kentucky, at that time, I soon found opportunity to try the above-named drugs in the treatment of cancer. Out of the first 7 patients that I treated, 6 of them were permanently cured. The success in these cases brought me others, and in three or four years I had treated probably 50 or more cases of cancer, curing about 75 percent of them. In later years, my percentage of cures has been, at least, 85 percent; which is due to my better judgment in selecting cases for treatment, and also to better administration of the remedies used. I regret that I have lost some of my records in this work, and, therefore, can not give exact figures to show the successes and failures which I have made; still, the above-given percentages are approximately correct.

Successful Use of Caustic Potassa and of the Galvanic Zinc Needle

During my experience in treating cancer I have given the following agents more or less trial, to wit: Caustics, knife, x-ray, radium, high frequency electricity, Paquelin cautery, and the galvanic current applied with zinc needles. All these I have now abandoned, save caustics and electric needles.

Having read a good deal of Doctor Massey's success in treating cancer with the galvanic current and zinc needles, I went to Philadelphia to see this treatment demonstrated. I was well pleased with it, and for the past five and a half years I have used the needle in my own practice with satisfactory results, but not to the entire exclusion of

some other remedies. The needles can be used in certain locations where it would be impossible to employ the caustics, only to a limited extent, namely, cavity of the mouth, nose, vagina, rectum, and eyelids.

Surgeons who write upon this subject have a good deal to say about removing every diseased cell, and so on. I admit, where this is accomplished, every case thus operated upon will result in a permanent cure; when, however, the healthy and the diseased tissues are intermingled to an unknown extent, surrounding malignant growths, the microscope alone can differentiate between the two. Then how can the surgeon know when he has succeeded in removing every diseased cell? He can not know, and his judgment alone can guide him in the operation. If there be one cancer-cell left in the wound or outside of it, the trouble is certain to recur soon or late.

Doctor Robinson says that the inflammation resulting from the caustic application will devitalize the cancer-cell, for quite a distance beyond the necrosed area in the inflammatory zone, and Doctor Massey claims the same action for the mercury-ions that are driven through the tissues from the zinc needle by the electric current. Whether this theory is true or not, clinical results seem to support it.

Basing my opinion upon a personal experience of twenty years in treating malignancy by both surgical and nonsurgical means, I can not subscribe to the belief that surgery is the only "rational" or the "one essential" means of treating cancer, or even that it is as good as some other modes of treatment. Admitting that surgical and nonsurgical treatment of cancer should yield equally good results, still, I should feel impelled to accord nonsurgical measures first place in treatment, for the reason that, I dare say, there are twenty or more persons who would take nonsurgical treatment for one who would submit to a knife operation.

I will detail the treatment of a few cases of cancer with results. In one case, I present three illustrations of the patient, to show exact conditions before and during treatment. These pictures tell their own pathetic stories more graphically than I can pen them.

A Few Examples From Practice

Case 1. Farmer, 50 years old, cancer of upper eyelid, growth size of thumb-nail, much thickened, and badly ulcerated. The eye was closed all the time, owing to the condition of the lid. The patient was chloroformed, then three zinc needles which had been coated with metal mercury, were thrust through the full

breadth of the lid. The needles were connected by No. 32 insulated copper wire to the positive pole of the wall plate, while a distributing pad of cotton, wet with a solution of sodium chloride, was connected to the negative pole of the wall-plate and placed on the back of the patient's neck. A current of 145 ma was passed for thirty-five minutes. The growth was entirely devitalized and sloughed off in about ten days. The cure was perfect, for four and one-half years have elapsed since that treatment and the disease has not recurred. An effort was made to save the patient's eye, by passing a thread through the margin of the lid, at its center, so that it could be lifted free from the eyeball, but the tissues were too rotten to hold the thread and it pulled out, hence the organ of sight was unavoidably sacrificed.

Case 2. Lady, 69 years old, cancer of mouth on top of gum, where the molars had been extracted. The growth was one inch in length, covering the full width of the gum and jutting one-fourth of an inch above its level, fungoid in appearance and sensitive to touch. After the patient was etherized, with a mouth-gag in position on the opposite side, to hold the jaws apart, two spade shaped zinc electrodes coated with mercury, 1-3 of an inch wide and 1-2 inch in length were thrust through the growth until their points rested firmly on the jaw-bone, then connected with the wall-plate, as described in Case 1, and a current of 100 ma passed for one hour. The diseased tissues necrosed and soon sloughed off, and were quickly replaced by new healthy growth. This was done thirteen months ago, and the growth has not reappeared. The patient's mother died of cancer, and a first cousin died of cancer of the mouth. I mention this to show the part heredity plays in malignant growths.

Case 3. Farmer, 72 years old, small cancer on side of tongue, caused by biting it in chewing. Two applications of fuming nitric acid, made one week apart, wrought a cure in four weeks. This man was cured twenty-three months ago and has had no further trouble since then. He lost a first cousin through cancer of the breast.

Case 4. Farmer, 69 years old, cancer involving floor of the mouth outside of gum, extending from first molar to wisdom-tooth and well to cheek, latter in contact with lesion. This patient was treated exactly as No. 2, except that 8 zinc needles the thickness of darning-needles were placed in the affected tissue and a 100 ma current was passed for seventy-five minutes. Three subsequent

minor treatments, given a month apart, seem to have effected a good cure. This patient was treated last autumn, and at present there is nothing to indicate a recurrence. From loss of tissue, the mouth is drawn somewhat on the affected side. The patient's mother died of cancer of the breast.

Case 5. Mrs. J. P. L., 50 years old, cancer of cheek. Her family physician had removed the growth with the knife, but soon after healing it reappeared. The lesion, when I saw it, was about the size of a dime. I injected a 4 percent solution of cocaine well around the growth, then cauterized it with a stick of caustic soda, until I was satisfied I had destroyed the growth with its outlying cells, or roots. The patient made a good recovery, with only a small scar remaining. This was done nine months ago, and as yet there is no trouble, and not likely to be. This case could have been treated with the needles just as successfully, but it would have necessitated general anesthesia, which I always avoid when possible. The patient's



Fig. 1. Showing Case 6 at the beginning of treatment.

grandmother, mother, and one sister died of cancer.

A Bad Cancer of the Face

Case 6. Mrs. F., 74 years old (shown in the photographs), cancer on side of face—a papilloepithelioma. This growth started as an ordinary mole and reached its maximum size in twelve months. In its largest circumference it measured 9 inches, and was about 3 inches in length, and its base was 2 1-2 by 3 1-2 inches. The dark tissue at its apex was in a state of necrosis and would soon have sloughed off spontaneously had it been left alone. When the patient was chloroformed,

5 flat zinc needles, the thickness of stout telegraph-wire and 3 1-2 inches long, were pushed through the base of the tumor-stump against the face, and a 140 ma current was

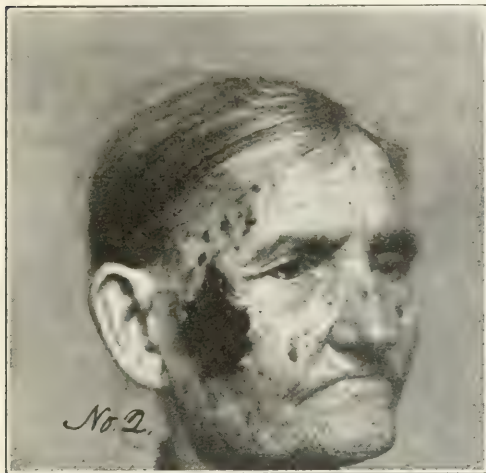


Fig. 2. Tumor sloughed away. Photograph taken twelve days after Fig. 1.

passed for sixty-two minutes. At that time respiration became so much embarrassed that the current was turned off and further treatment abandoned; however, the devitalization was sufficient to destroy the tumor, and it sloughed enough in twelve days so that by clipping a few tissue bands at its base it came away. I then waited, to note results, and in three weeks it had healed nicely from every side, except an area at the middle inner edge of the size of a silver dollar. In this part I suspected diseased tissue not devitalized at the first treatment, and to this I applied a zinc-chloride paste for twelve hours.

That was on February 4, and today, March 15, there remains a small lesion, the size of a silver quarter, which I believe to be cancerous. I again have applied the zinc paste, with instructions that it remain on for twenty-four hours. This case I do not report as cured, but merely to show the conditions under treatment to date; nevertheless, I hope for a complete cure soon, as there is no glandular involvement, so far as I can detect. The dark spots, scattered over the patient's face, as seen in illustrations No. 1 and No. 2, are what are known as precancer keratoses, and which frequently result in cancer. I removed these and applied nitrate of mercury, to prevent their return.

Here is the other side: Mr. B., a ship-carpenter, of Metropolis, Illinois, came to see me in April, 1909, for a cancer on his neck.

The growth had been removed by a surgeon, but had returned. Owing to the proximity of the growth to the carotid artery, I thought the zinc needles could be employed with greater safety and accuracy than the zinc paste, and, as I had not seen the needles used at that time, I advised the man to let Doctor Massey, of Philadelphia, treat him. However, a few days afterward I decided to go to Philadelphia myself and see the work done. Making a trip to Mr. B., to persuade him to accompany me to Philadelphia, I found that he had gone to Rochester, Minnesota, to have his cancer removed by surgery. A few months after Mr. B. had returned from Rochester, he came to my office on a friendly visit, to show me the results of the operation. Examining him, I discovered a small lump beneath the skin, just outside of the scar, and, so, told him that the malignant disease had reappeared; but he seemed to discredit my statement. Some months later, I learned that he was taking x-ray treatment from one of our city physicians for his cancer. Probably



Fig. 3. Photograph taken two months after Fig. 2.

eighteen months thereafter, I was in Metropolis on business and there was told that Mr. B. had died of his cancer. I refer to this case, to show that surgery has its record of failures in cancer other than those of the female breast, even when the operation is done by the best of surgeons.

In Recapitulation

To recapitulate. At a safe estimate, I have treated at least three hundred malignant growths, during the past twenty years, with approximately eighty percent of cures. Out of all those whom I have treated and dismissed

as cured, sixteen have had recurrences of their former trouble. Four of this number, who took a second treatment, have remained free of cancer. Three others whom I felt certain I could cure by further treatment refused my services; one of these died of cancer, the other two I lost sight of and can not report final results. All the rest died of cancer save one, who still survives, but is incurable.

I have amputated two female breasts for cancer. One of which received little, if any, benefit from the operation, and died a few months later of her cancer. The other was doing nicely several months after the operation, with no indications of a recurrence, so her family physician informed me. This case was operated on nearly twelve years ago, and as I have heard nothing from it for more than eleven years, I suspect that the patient has succumbed to a recurrence long ago, as the disease was well advanced when I did the operation, and I have never known such a case to result in a permanent cure. If cancer of the female breast is to be treated with any hope of a permanent cure, it must be done before ulceration or metastasis occurs.

The Paquelin cautery I used in one case, but it only aggravated the trouble and the patient soon died. I have employed the x-ray and radium in a few cases without benefit. High frequency current has cured a few small cancer lesions in my hands, but it possesses no advantage over some other remedies, which are just as efficient and less objectionable to the patient. Arsenical paste, made according to Doctor Marsden's formula, I consider dangerous, and I no longer use it. I believe I lost two patients, both feeble old women, who died a few days after I used arsenical paste on them, with severe gastritis. I now use only caustics and the zinc needles with electricity. In this paper I have used

the name cancer to designate all varieties of malignant neoplasms.

In anticipation of some criticisms that might be made by those who are unfriendly to my views expressed in this paper, I make the following explanation, to-wit: The clinical cases detailed above have none of them yet passed the five year limit generally required to test the permanency of a cure, although I have never had a recurrence later than nine months after a supposed cure. I cite these cases because they are of more than ordinary interest, owing to their location and the results obtained—three in the cavity of the mouth, one on the eyelid. No. 5 I have referred to only to show that surgery failed where a stick of caustic soda succeeded with one treatment; No. 6 for its great size, age of patient, and the probable good result which may accrue from treatment. I could give, if necessary, a large number of names, with postoffice address, of persons whom I have treated from five to twenty years ago, that are free from a recurrence to this day. If any doubt my diagnosis, I will say that I have had a number of specimens of growths which I have treated examined by competent pathologists, who have upheld my diagnosis in every instance. I have preserved a specimen from case No. 6 that any one can have for a section examination, if he wishes it.

My defense of non-surgical treatment of cancer will no doubt be resented by some, but I feel certain that the rank and file of the medical profession will accept my views when they have given both methods of treatment a fair trial. My personal experience, as recorded in this paper, can be verified in every instance by clinical evidence, and I fear no successful refutation of it. The evidence is all in, my argument is concluded, and I rest my case with the profession, and await its verdict.



Leprosy in the Philippines

Experiences With the Disease Among the Savage Mountain Tribes

By THOMAS E. MOSS, M. D., Kevil, Kentucky

Formerly Surgeon in the Philippine Constabulary; later District Health Officer in Northern Luzon

EDITORIAL NOTE.—This concludes Doctor Moss's fine article on Leprosy, begun in our last month's issue. We are fortunate in being able to announce another series of articles by Doctor Moss, dealing with phases of medical practice in the Philippine Islands.

[Continued from page 329, April Number]

The collecting of lepers up in the mountainous interior of the Philippine Islands was an arduous and dangerous undertaking; much more so than down on the coast among the Christians, who are used to Christian methods, and where I had all the soldiers I wanted to assist me. Whereas, up in the mountains among the savages, I could not use soldiers with any degree of success; for, when I would approach a savage town with my soldiers, the inhabitants would see us from afar and know that something was on foot. So, they would be on the alert, and if there were any lepers or criminals among them they would hide or take to the mountains.

These savages always have a few sentinels posted on high points from which they command a view of all trails approaching the place. These sentinels generally are old women whose eyes have not become dimmed and whose lungs are good. Many times the inhabitants of the town owe their lives to these women, who, upon the approach of an enemy, give the shrill cry of warning which, if it is a war-party that approaches, is answered by the war-cry of the town; but also by the defiant cry of the approaching war-party. The mountains take up these cries and throw them back and forth across the gorges, until it makes one's flesh creep and crawl to hear it.

Another reason why it was impracticable to use soldiers was, because the soldiers at the military posts in the mountains have been recruited from the neighboring savage towns; consequently, I could not select six soldiers to go with me without five of them being enemies to the objective town; for, every town is against every other town. And, while the soldiers themselves give up all animosity toward each other when they enter the service, the people of the towns look upon the soldier who has been recruited from any town but their own as an enemy. So, I had to use a good deal of judgment and tact at every turn; and even then, with the best-laid plans, I often met with mishaps. The word

"mishaps" is a very charitable one; for, I have had boulders rolled down on me, have been cut, speared, and poisoned, not to mention the times when I was not cut, speared, and poisoned when the attempts were made.

Instead of taking soldiers with me, I usually took my trained Igorote. This man was, at one time, a head-hunting savage and roamed the mountains doing his allotted part in perpetuating the feud which had existed so long that he had forgotten when it started or what it was about. But this would be another story altogether. Let me just say that he came into my possession soon after this mountainous interior became a part of my jurisdiction. Dacayon was his name, and he is seen in the picture standing on my left, with his head-axe raised above my head. He is armed with a revolver also—a 45 Colts, the old-fashioned single-action kind. (This, by the way, is the best, not even excepting the new 45 automatic, which is used in the regular army now; for, the automatic will fail to eject the empty shell; after it has been fired for a long time it will "hang" and may cause the death of the owner, who may not kill with the first shot and not have time to unhang the mechanism. I used a 38 automatic when I first went to the islands, but had to discard it for a single-action revolver.) The savage on my right is the one who went with me to carry my blanket and food. He would fight, too, if the occasion demanded, but could not make an arrest, as could Dacayon, for I had had Dacayon appointed a deputy marshal, as already mentioned.

The Dreadful, Mysterious Gorge

Forty-five miles up in the mountains is the savage town Lobo, situated at the head of a draw made by a V-shaped arrangement of mountains. In this part of the mountains the geological formation is almost entirely coral, wherein are found caves of most wonderful beauty. One especially comes to memory, as it figures in this narrative.

During the upthrust of prehistoric times, the topography of this part of the island was ar-

ranged so that three mountain ranges were placed in a triangle; the resultant long valley formed by two of them comes down and ends abruptly at the base of the third, and one riding up the trail on the ridge and looking down would think there was no outlet for the river which flows down the valley and disappears at the base of the range upon which he is riding. Upon closer inspection, he will

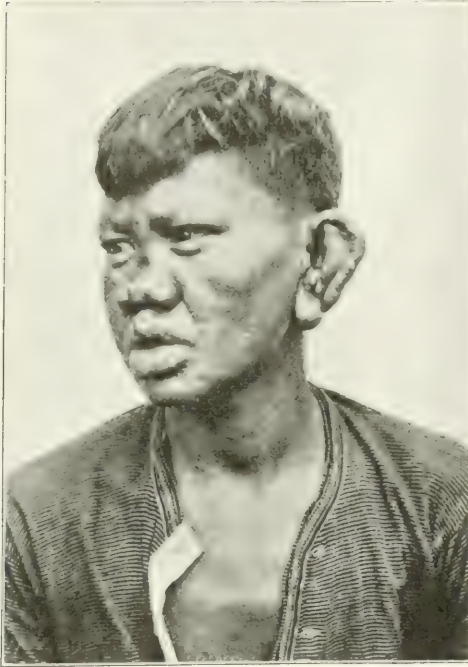


Fig. 1. A well advanced case of leprosy. Note the nose and ear lesions.

see why there is no lake formed by this river, for it enters a monstrous opening and is lost to sight. One may travel this country for weeks and never have any idea of what becomes of this river, unless some one tells him, for there are but few who have had the bravery to climb down off the trail and enter this great opening. Three men, to my knowledge, have done this.

At certain times, during the dry season when the river is low, one may enter this cavern and, if he does not get killed, he may make his way through wonderful chambers, in which the light from the pine torches is reflected a million times from the crystal-like walls, until it seems that a blaze of glory is illuminating the place. The whole thing is so wonderful and weird that it takes strong nerve to enable one to follow the stream on down over waterfalls and whirlpools, around bends and through miniature lakes. One's

nerves are apt to fail him down here in the bowels of the earth when he realizes that he is beneath a whole mountain range, with millions and millions of tons of rock and earth above him, and that at any moment a cloud-burst may occur up at the head of the valley where the river has its source and flood the whole cavern from floor to roof.

You may not catch the meaning of my words, but, if you had lived in this land of "spirit worship" for any length of time, you would have no trouble in understanding; for, one can not live among these people long and listen to their weird tales and see their practices without absorbing some of it, for there is an indescribable something in this tropical country that takes hold of a man, especially if he is exposed to the danger of unseen death, as is the case many times, for the mode which the savages pursue in killing is to lie concealed by the side of the trail and spear one as he passes.



Fig. 2. Body lesions are shown clearly in this picture.

When a man first comes to this part of the country, he does not believe all this, but after he has seen a number of headless bodies he begins to wake up to the reality of the thing and in some instances becomes as superstitious as the savages. I know that I have, many times, put my trust in things supernatural, for there was nothing tangible to go by at



Fig. 3. Same patient as the preceding, showing extremities

those times. You may laugh if you wish but you would not have laughed if you had followed me, and you not only would have not laughed, but you would have been glad to have had something to lean upon, even if it was a myth.

After traversing this cavern for the distance of a mile, one may look up and see the light of day filtering down through a jagged opening in the vault. This opening has been utilized by an Episcopal mission, which is

situated up on a plateau on this mountain, to get rid of its sewerage. One may enter the cavern at this point with the aid of a long rope, for the cavern has not begun to slope downward to any great extent before passing beneath this part of the mountain. A little farther along its course it dips down, and by the time one reaches the other opening he has descended three hundred feet or more and has reached another river, having passed completely through a mountain range and traversed a distance of fifteen miles. He has reached a totally different country, with a different slope and peopled with another tribe of savages, with ways and dress of entirely different character; he has reached the country of the Bontoc Igorotes, who have the reputation of being the fiercest fighters in the mountains. This underground river emerges into the Bontoc River through an opening very much smaller than the one by which it enters and lies below the waters of the Bontoc River except at very low water-mark. There is not one person in fifty who knows of this opening, for one may pass down the trail which follows the river a hundred times and never suspect that the underground river flows into it. All this may seem beyond the subject, but around it the next episode centers.

The Two Wealthy Lobo Victims

In the town of Lobo lived two very rich savages, brothers, both afflicted with leprosy, but who had evaded the authorities for many years. These men's rice-fields were near this underground river just described, so also were their homes, and whenever a leper-hunt was started they would secrete themselves in this cave, remaining there until the hunt was over. They always escaped, as no one would dare death by going in after them; they could not be starved out, for they always took along plenty of food, or, when that gave out, their servants, through openings in the roof or in some other way, supplied them in the nighttime. They could not be followed, for no one dares to travel in these mountains at night. When night comes in these mountains, it grows dark suddenly, and it is worse than dark, for the clouds form an impenetrable mist. Now, when one speaks of clouds, people think of something 'way up in the heavens; but, in the mountainous parts of this country, the clouds at night are right around and about one. But even in the day time one may look up and see clouds enveloping some of the highest mountain tops, and, though they are so high¹ above, he knows that

they will steal back down and cover the ground at his feet like a blanket as the shadows of evening begin to fall.

Of course, I heard of these two lepers as soon as I took up my official position in this part of the country, for everyone who had had anything to do with the failure to apprehend



Fig. 4. Leprosy is a living death, when advanced.

them took particular pains to tell me about them; they wanted to see me fail, as had they. Being of Scotch-Irish blood, I took the dare and soon made it so uncomfortable for those two men, by my unremitting pursuit, that they sent me word they were going into the cave armed and would kill anyone who came to get them, determined not to be taken away by the officers.

The Punishment for Headhunting

They had no idea what a leper colony was; they simply knew that those of their people who had this disease and were caught by the officials were taken away and never returned to their cloud-kissed homes to breathe the air of freedom; when a warrior was taken, no one came to fill his place, to wield the spear and the headax in defense of his home and loved ones; there would be no one to send in his stead, to fight a hostile town; no one to take his place in a headhunting expedition, to bring a head to be used in the yearly

sacrifice that had to be offered up to the spirits to appease them, that they might let the rice and other crops grow to maturity and bring forth a good harvest to feed and fatten the men, women, and children of the settlement that they might grow strong and multiply, and fight and die as their forebears had done for uncounted generations before them. They knew that, if a man was taken from them who had, as yet, not avenged the death of a relative killed by a hostile clan, there would be no one to carry on the death-feud and clear the good name of the town from the disgrace of having lost a head to another town; for no one is permitted to let a feud die out until the blood-debt is paid to the fullest extent.

It must be remembered that these reprisals are continued even though the law punishes this feudism with life imprisonment. A large penitentiary has been built up in the mountains at the town of Bontoc, because the savages can not live down in the lowlands, where the temperature is always high, and they soon pine away and die. But here, in the mountains, those imprisoned for killing fellow men can breathe the mountain-air and see the towering peaks to sustain them, while always they have the hope of being able to escape. They will persist in attempting to escape, although it means certain death; for, when a prisoner escapes, the soldiers, who themselves are savages, are turned loose to hunt them, and it is like turning a pack of bloodhounds loose; they invariably bring the man back dead, swung on poles carried by two of them.

In the case of the savages, the death-penalty is always commuted to life imprisonment, the government having recognized that it would not be right to hang them, as they are only following their teachings and religious beliefs when they kill an enemy. It is the government's intention to keep these savages in the penitentiary for ten years, when they will be permitted to return home on parole; it being hoped meanwhile to break up the headhunting among the natives. Moreover, these prisoners have been taught trades while in confinement.

Dacayon's Shrewd Scheme to Ensnare the Two Fugitives

When the message from the two lepers of Lobo was brought to me, I was at a loss as to how to proceed to capture them. So, I held a consultation with Dacayon, my native aid, and the other savage, who served as a carrier. Dacayon said that he would go into the

cave alone and get the men, but that in all probability there would be no use in sending them to the leper colony after he had brought them out—but just to bury them some place near the mouth of the cave. You may think this was a simple thing to say; but, just stop a moment and think: would you like to go into a cave to fetch two unwilling, armed savages? I admit, Dacayon said it very simply, and had I said, "Go," he would have started at once, inasmuch as he already was armed and that was all the preparation he thought necessary, knowing very well that the chances were against his ever needing anything but the revolver; food and extra clothing were superfluous.

I knew very well the risks Dacayon would run, and if he started out I never should have expected him to come out of that cave alive. I did not have any doubt but that my trouble with these two lepers would be at an end; still, I did not want to lose Dacayon or injure the two men, if I possibly could avoid it. So, I told Dacayon he would have to hatch up some other scheme to capture the two.

Dacayon asked time until the following morning, when he would report. He unbuckled his belt containing his revolver and cartridge-box, handed them to me and asked that I give him two dollars. I did not exactly understand what all this meant. I recalled that I had told him, when I had him appointed a marshal, that I did not ever want to see him drunk while he had his badge and revolver with him, or, if he wanted to visit the savage part of his home town and take part in any of the ceremonies, he first must deliver up his revolver and badge. These ceremonies of the savages always meant plenty to eat and drink, and everyone of them got drunk. The drunk, however, does not last long, as they use an alcoholic drink made out of sugarcane, and, although it makes one drunk very quickly, its effect does not last over an hour or two.

I gave Dacayon the money requested, took his revolver, and told Supli, my carrier, that he might go along if he wanted to, but to be back the next morning. They took their spears and axes (which they kept behind my desk when they were not on the trail) and left me with the assurance that they would not get into any trouble and would be back in the morning.

I did not sleep very much that night, trying to evolve a plan of my own as well as endeavoring to fathom Dacayon's proceedings. Getting up at daylight, I went to the hospital, thinking to find my two men, for it is

the custom of the savages to rise with the sun and sit in front of their houses in the warming sunshine. But there was no sign of them, and at 8 o'clock I went back to breakfast. I did not like the looks of things, and feared that my men might be going after the lepers without further ado. After breakfast, Dacayon not turning up, I sent another corpsman to the savage part of the town to look for them and also to bring me the "presidente" (chief) of the savages.

The town of Bontoc is the capital of the province and, while the old savage portion is just the same as ever, the new, American section looks like some fashionable watering-place. Here, my hospital was located. At 9 o'clock, the corpsman returned with the presidente, who, after being questioned closely, told me that Dacayon and Supli had gone the evening before to the town of Lobo, but had not taken their spears or axes, nothing but an umbrella apiece. I was more puzzled than ever and came very near queer-



Fig. 5. Look at the face and hands of this poor woman

ing the whole business by taking a detachment of soldiers and storming the cave; for, I thought that my two men had gone in after the lepers, as the cave lay between Bontoc and Lobo. However, upon reflection, I decided to wait awhile, knowing that it would be too late now. If the two actually

had gone into the cave, they either would have been killed, or would be on their way back to Bontoc.

It was 4 o'clock when the two men walked into my office. And this was their story: They had gone into the savage part of our town and held a consultation with the old men, and they advised them to proceed to Lobo, as nothing was to be learned in Bontoc. They had left their spears in Bontoc, as I was informed. They carried the umbrellas, in order to make it appear that they were simply traveling down to the coast, as they often had done. They reached Lobo at nightfall and asked permission to remain there for the night. They bought rice and cooked it, and shared it with the headmen of the town. They then asked whether they might buy some "tapouy," an alcoholic drink made from rice, but much milder than that made from sugar-cane. After this drink had been disposed of, the headmen brought out some "vassie" (a sugar-cane spirit). Then Dacayon offered to buy a big jar of vassie and suggested they have a feast, the people of the town to furnish the rice and a hog. These jars hold from twenty to thirty gallons, and by the time it was half empty most of the folk were drunk and bragging of what they had done in the way of headhunting, and other deeds; this being their custom.

Now Dacayon began to tell of how many heads his father had taken before he was taken away by the health-officials, who had accused him of being a leper, and how he hated the authorities for sending his father away, and that, if he, himself, had been big enough at that time he would have killed all of the officials and set his father free; adding that, of course, his father would have had to hide out somewhere, but, then, that would have been better than being gone forever. Gradually he led up to the two lepers of Lobo who were hiding at that time in the cave, and it was decided that some of the vassie and hog were sent to those two hiding men.

However, most of the people were too drunk to make the trip. Thereupon Dacayon said he would carry the food to the lepers in the cave if one of the lepers' servants showed him the way. Accordingly, the servant was called, who took Dacayon into the cave by way of a small opening unknown to anyone but the inhabitants of Lobo.

They found the lepers in a small room away up near the top of the roof of the cavern, where the water never reached even at the highest flood time. Dacayon and the servant

sat by and talked while the two fugitives finished their meal and potation, staying that they might carry back the utensils in which the stuff had been brought. Upon leaving, Dacayon presented the larger of the lepers with his umbrella, telling him that he could use it in traversing the cavern and not get wet from the moisture which dropped from the roof in certain places; he also showed him how to open the umbrella, and all about it. Why, do you suppose, Dacayon did this? Well, wait and see. I did not know, either, when he was telling me—I had not the slightest idea.

When Dacayon had finished explaining the umbrella, he picked up the food-vessels and, with the servant, went back to the town. Meanwhile he found out from his companion how often and at what times he carried food to the lepers. Dacayon slept in Lobo that night and in the morning went up over the mountains as if he were going on toward the coast; however, as soon as he was out of sight, he switched around and returned to Bontoc.

How It Worked Out

What good had all this done, I asked Dacayon, and how were we to get the quarry? He said, I should start toward the coast with the lepers I already had, while he and Supli would go by the trail which led near the cave, get ahold of the men, and then meet me at Sagada with them. So, I gave him his revolver and belt of cartridges and told him that he was at liberty to do as he pleased until the morning following the next day, when I should be at Sagada with my consignment of lepers, and would expect to find him and Supli there with his two from the cave.

Upon reaching Sagrada, sure as you're born, I found Dacayon with the two lepers handcuffed to each other, with leg-irons on their feet, and tied to a post, with Supli guarding them with his spear. Dacayon, with Supli, had gone into the cave by the route which he had learned when he went in with the food. Dacayon had taken off his revolver belt and all surplus things, placed his revolver inside of an umbrella, and, with Supli in the rear with his spear and leg-irons, he had taken a bowl of rice in which he had concealed two pairs of handcuffs and gone in as softly as possible, so as not to waken the lepers, whom he hoped to find asleep, it being night when he entered. He was fortunate enough to find both sleeping, but before he could get close enough to them they awoke. Still, seeing who it was, and the bowl of rice,

they did not reach for their weapons, but bade Dacayon come near the fire, which one of them rekindled.

Then it was that Dacayon set down the rice, reached into the depths of his big umbrella, took out his "45," and told the men not to move or he would have to send them to join the spirits of their dead. Now Supli came forward and put the handcuffs on them, while Dacayon kept them covered with his revolver; then, with Supli and his spear marching in the rear, Dacayon led the way down to the mouth of the cavern; how-

ever, before leaving the cave, he affixed the leg-irons, so as to prevent them making a break for liberty.

* * *

Now, good reader, this is *not* the way it happened. I must leave that to your imagination. The fact is, that I did not find Dacayon at Sagada with the lepers. I found Dacayon, but no lepers. And when I asked him what had become of the lepers, he said, as he wiped the blood from a spear-thrust in his shoulder: "I sent them to Culion—Supli went with them."

Gonorrheal Arthritis

By WILLIAM J. ROBINSON, M. D., New York City

Editor of The Critic and Guide, and the American Journal of Urology; Author of "Never Told Tales" and Other Books

GONORRHEAL arthritis, or gonorrheal inflammation of the joints, is not a very frequent complication of gonorrhea. It occurs in about 2 percent of all gonorrheics and is encountered much more frequently in the male than in the female sex, not only absolutely—for this is self-understood, so many more men having gonorrhea than do women—but also relatively.

But he whom it does attack has the devil to pay. While just lately the results of our treatment are better than they used to be, nevertheless there still are cases which resist every kind of treatment, and I know personally of several patients whose careers have been ruined by this complication. One case is that of a young pianist, very talented and most promising, who had to give up his hopes and his profession on account of an ankylosed wrist-joint, resulting from gonorrheal arthritis. Another is that of a fairly well-known surgeon, whose finger-joints became thickened and somewhat ankylosed, and who had to give up surgery and fall back upon internal medicine, in which he is much less of a success than he would have been in surgery.

Etiology

At first no causal relationship was thought of between joint inflammation and gonorrhea. When in a patient having gonorrhea there developed inflammation of one or more joints, it was considered merely a coincidence. Any man can contract rheumatism, and an inflamed joint during the course of an acute or chronic gonorrhea was considered merely rheumatism, for which the gonorrhea was not in any way responsible. Later on, when cases

of arthritis in the course of gonorrhea were seen to be too frequent to be accounted for merely by coincidence, it was thought that the gonorrhea acted as a predisposing cause by weakening the organism, reducing resistance, and so on. Finally, however, gonococci were found in the exudation around the joints, and it was then seen that the gonococcus plays not merely a predisposing but a direct role.

It must not be thought, however, that in every case of gonorrheal arthritis gonococci may be found. Sometimes other bacteria, such as staphylococci and streptococci are present; in still others no bacteria whatever can be demonstrated. Here it is assumed that the inflammation is caused, not by the gonococci themselves, but by the toxins generated by the gonococci.

Nor must we blindly assume that every inflammation of a joint occurring during the course of a gonorrhea must, necessarily, be gonorrheal, for a patient having gonorrhea may, the same as any other man, get an attack of acute inflammatory rheumatism. This must be borne in mind, to avoid regrettable failures in practice.

While any gonorrheal focus in the genito-urinary tract may give rise to gonorrheal arthritis, it is particularly frequent where there is prostatitis or seminal vesiculitis. The latter is considered the most important etiologic factor, on account of the rich network of blood-vessels which surround the vesicles

Symptoms

Points of differential diagnosis between it and acute rheumatism or rheumatic arthritis

are: the presence of gonorrhea; the fever is much higher in inflammatory rheumatism than it is in gonorrheal arthritis; also the pain is more severe and more joints are affected; while in gonorrheal arthritis two or three joints may be affected, as a rule only one is involved.

The frequency with which the various joints are affected is as follows, in the order named: Knee-joint, ankle-joint, wrist-joint, finger-joint, elbow-joint, shoulder-joint, hip-joint, jaw. The knee-joint, as said, is the most frequently attacked, furnishing as many cases as all the other joints combined.

The symptoms vary from slight transient pains in and about the joint, without any inflammation, to severe inflammation with effusion. The effusion may be serous in character, serofibrinous or purulent. The pain in the effused joint may vary from none at all to one almost as severe as that of acute articular rheumatism. The attack may come on suddenly. There may be a large effusion of liquid around the knee-joint, the skin over the joint may be red, and still there may be no pain whatever, either spontaneous or on handling and pressing.

The inflammation may end in resolution, in ankylosis or in abscess, and, unfortunately, there is a tendency to recurrence. There are some rare cases in which not only the synovial membranes of the joint but of the periarticular tissues participate, the joint becoming a phlegmonous abscess which requires prompt surgical treatment. Such instances, however, are rare, and the general practitioner will not have many chances to see them.

Treatment of Gonorrheal Arthritis

Frankness demands that we state at the outset that the treatment of gonorrheal arthritis can not yet be termed a brilliant success. We cure many victims, we relieve many more, but many cases seem to resist all efforts; and we are unable to predict when patients will be benefited or when they will remain uninfluenced by treatment. Sometimes the apparently mildest cases laugh at all our efforts, while severe cases with joint involvement, where there even is an apprehension that operative measures may become necessary, get along very smoothly.

It is perfectly legitimate to start every sufferer from gonorrheal arthritis on salicylic preparations, both internally and externally. We have a right to do so, for two reasons. First of all, the diagnosis between gonorrheal arthritis and rheumatism is not so absolute

that the possibility of error always can be excluded. A man having gonorrhea and attacked by pain and inflammation in the joints need not necessarily, as stated before, have gonorrheal arthritis. A man who has gonorrhea can contract ordinary rheumatism the same as any other man. Then there may be such a thing as mixed rheumatism, articular inflammation due to the gonorrheal germ and its toxins or to other germs. And, second, even in pure cases of gonorrheal arthritis the salicylic preparations are of some benefit, although, of course, the benefit is slight as compared with the benefit wrought in true rheumatism. I, therefore, in every case of gonorrheal rheumatism, start with large doses of sodium salicylate (15 to 60 grains), salol (5 to 10 grains), or aspirin (8 to 15 grains).

Externally, I have the painful parts rubbed in with an ointment consisting of methyl salicylate, lard, and woolfat, as follows:

Methyl salicylatis.....	drs. 2 (Gm. 2)
Adipis.....	drs. 4 (Gm. 16)
Adipis lanæ.....	drs. 4 (Gm. 16)

This is well rubbed in, covered with non-absorbent cotton and oiled silk or rubber tissue. The whole is held in place by a well-fitting gauze or rubber bandage.

This treatment produces a beneficial effect, for three reasons: first, on account of the analgesic action of the methyl salicylate; second, on account of the partial immobilization of the joint; third, on account of the warmth and the partial passive hyperemia induced by the rubber tissue and bandage.

Instead of the ointment, I often have the joints and painful parts painted with the following mixture:

Acidi salicylici.....	dr. 1
Mentholi.....	grs. 15
Guaiacoli.....	grs. 30
Alcoholis.....	oz. 1

The joint is painted, then protected with non absorbent cotton, oiled silk or rubber tissue, the same as after the use of the ointment.

Sometimes inunction with unguentum Credé seems to be distinctly beneficial.

If the salicylic preparations seem to exert no effect, we may proceed to saturate the patient with calcium sulphide (calx sulphurata, sulphurated lime) and arsenic iodide. The sulphurated lime may be given in doses of 1 to 2 grains three to four times a day; the arsenic iodide, in doses of 1-100 to 1-60 grain three to four times a day. Be sure to get a good quality of calcium sulphide (calx sul-

phurata), because much of it on the market is practically nothing but calcium sulphate, which is inert.

Bier's hyperemia is a well-recognized procedure in the treatment of gonorrheal arthritis, and in some instances gives very excellent and rapid results. In other cases, however, it fails completely.

Gonorrheal arthritis is about the one complication of gonorrhea in which we are justified in using gonorrheal vaccines. Not that the results are so brilliant, but they are better than in gonorrheal urethritis and in its other complications, and, second, because the disease often is resistant to other treatment. In such cases we are justified in doing something.

Fifty million gonococci should be injected as an initial dose (in women and young individuals, we may commence with 25,000,000), gradually increasing the dose to 500,000,000. The treatment is not to be kept up indefinitely or for a period of several months, as I have seen done in a number of instances. A physician with common sense will very quickly see whether the treatment is bene-

ficial, remains without effect or acts injuriously. Occasionally the mixed gonococcus vaccine seems to act better than the gonococcus vaccine alone.

And last, but not least, the gonococcal foci must be treated vigorously. By vigorously, I do not mean roughly or strenuously, but I mean gently and persistently. There is no use hoping to cure a patient of his gonorrheal arthritis if there is an active or even a mild gonorrheal process in the urethra, or if there are gonococci in the prostate gland or in the seminal vesicles. The urethra must be irrigated, the prostate gland and the vesicles must be massaged, and everything else possible must be done in order to cure the local lesions and to eliminate the gonococci from the patient's system.

Some surgeons advocate drainage of the seminal vesicles or else their removal as a cure for gonorrheal arthritis. I have my opinion about vesiculotomy and vesiculectomy, but as these are not operations that will be undertaken by the general practitioner, for whom this is written, it is not necessary to discuss them here.

An Old Doctor's Life Story

An Autobiography

By ROBERT GRAY, M. D., Pichucaleo, Mexico

EDITORIAL NOTE.—This article is the fourth installment of Doctor Gray's autobiography. Every physician should read this intimate record of the unfolding of an unusual life. Doctor Gray was born in the Old South, was educated in France under the old regime, fought through our Civil War on the Confederate side, and soon after its close plunged into the very depths of tropical Mexico, where he has spent the greater portion of his romantic and adventurous life. Now, at the age of eighty-five, he has given his story to the world through the pages of "Clinical Medicine."

IV. THE RETRIBUTION OF REPENTANCE.

WHSOEVER has experienced the rapturous ecstasy of seeing the chimney-tops of the old homestead begin to loom up to view, as an intervening hill is ascended, after an absence of a number of years, and knowing there is no vacant chair at the fireside and table, may appreciatively realize my sensation as I climbed such a hilly slope. But the curtain must not rise from the scene in the house, where I entered unannounced.

But my sweetheart, nobly devoted Carrie! My hand fain would tremblingly refuse its office rather than—but let this pass! Ye heavenly ministers! dry her angelic eye, should she weep for me tonight!

That bright morning-star of my early hopes and later despair had dawned and shone in all the cheering brilliancy of coy loveliness that

so illustriously adorned the fair young queens of the South in ante-bellum festivity. She no longer was the peevish girl of the piano kissing-episode, but a woman of pensive dignity whom any man might have been proud to number among his most precious friends; yet, as the prospective companion of a whole life—alas! such a life as this life of destiny of mine! Fortunate woman, to have early escaped the dark involvement.

I was uncomfortable in her presence. No vagrant thought of kissing her stealthily flitted in the perturbed chambers of my unquiet brain. The phantom shadow of the parlor scene in the house of my old friend in New Orleans seemed to thrust a menacing protest between us, admonishing me that I was unworthy of such a prize. And I felt the forcefulness of my unworthiness softly stealing

upon me, like vultures perched around a prospective victim while yet alive, the horrid prey-birds being endowed with faculties of prognostication no physician ever possessed. Had my crime been one of vulgar debauchery, its shadow never would have arisen between Carrie and me with the persistency of Banquo's ghost.

My sprightly cheerfulness had vanished. The new plantation that had fallen to my lot to open and establish was a haunting nightmare to me; and I masked my more poignant wretchedness under the guise of the uninviting task I was on the eve of assuming, and hurried forward the arrangements with energetic insistency. I resolved not to marry while that age of social exile was passing, four years being the shortest sober calculation required to complete the huge improvements.

I turned a deaf ear to the importunities of my sisters to take them to the ball in the house of my uncle—a pleasure they were forced to forego while I was abroad. I was reluctant to meet the gay young people who thronged the big ball-room; for I never expected to live among them again. I told Carrie that I was planning to live on the new plantation; and that, if she wished to escape being buried alive in that inhospitable refuge, she might retire from her compromise to link her destiny with mine. Her retort was that where I could reconcile myself to live would be a Paradise good enough for her, even from the inception of my enterprise.

My kinsmen had arranged to borrow a great block of money to buy slaves to do the terrible work that was dependent; but I insisted that the interest on borrowed money would hire slaves, many of whom were predoomed to die from the fevers they could not escape. The course of hiring was adopted.

Taking Charge of the Southern Plantation

Just twenty days after my arrival home I was two hundred miles away, under a tent on a little hillock, with marshes and swamps heavily timbered spreading around, far and near, ten miles from any human habitation, surrounded by a big battalion of poor hired negroes, housed the same, under tents.

I would pass over further reference to that colossal undertaking, were it not well that the public should not forget the crude pioneer work done in the great deltas of the South, ere there were stump-pullers, dynamite, ditching-machines, and steam-plows, by the twitching sinews of the hapless children of Africa, in proprietary slavery, whose sweat was gore. While I made the lot of the poor

miserable people who labored under my direction more tolerable than they were accustomed to have, as to housing, clothing, and food—houses having been built as rapidly as possible—the terrible work could not be modified. The forests had to be cleared away, broad, deep drainage-ditches cut, and levees built—herculean tasks. It was not the quantity of the work—the men not being overtasked—but its fearful nature among the bogs, in mud and water, under a pitiless sun, where the malaria was so prevalent that, metaphorically, it seemed that one might slice it with a knife. And then the fevers, and the fevers, and the dysentery, and the mosquitoes—inevitable consequences.

My Parisian knowledge and French medicines were not equal to the stern and pressing exigencies of the dilemma, though superior to anything else then employed in the medication of slaves establishing new plantations. I was forced to build and maintain a hospital; had to cope with three decimating epidemics in as many years; in consequence of which comparatively little progress was made; so that 1858 found me with no plantation made, although money and life had been sacrificed in the attempt sufficient to have completed the tasks had the country not been created for alligators, reptiles, and mosquitoes. I then put most of the remaining work out under contract, not trying to lower any bid; yet every contractor lost money.

In 1860, I began my own house, seeing my way clear to turn the finished plantation over to the company and get myself married during the Christmas holidays.

The Work of the Slaves

No medical man of this progressive age can form any adequate estimate of the character of that class of service; and I am probably the only one alive tonight who passed such trying ordeals in ante-bellum days; and there were hundreds of them then, possibly nearly all salaried men; yet, they could not escape the inevitable professional mortification of seeing the poor slaves die; they were impotent to save, no matter what their qualifications may have been. And I know tonight that there were no medical competents in that day and age; as I could sit here in my office and save ninety percent of those I saw go to the slave burying-ground over there; and have been doing the equivalent for years among these Mexican peons. I was not then vanquished by impractical ignorance, but by worthless trash and slops of medicine—yes, then the best-known to the profession anywhere.

While I passed the crucible test of those long and trying years, immune from any of the deadly diseases I vainly struggled to combat, Nemesis must have felt a satiated relenting, at times, when the epidemics were raging, and I slept only snatches in a rocking-chair in the hospital, with none but slaves to assist me. Engineers threw up their jobs and left in disgust, so that half of the time there was not one on the place.

But the drainage was complete in 1859, and other sanitary betterments were installed, in a degree that normal plantation health prevailed among the slaves during the sickly season of that year—preparations being perfected to stock the place with proprietary slaves at the beginning of 1861. From my childhood, smarting under the dominant despotism of the church, I had felt some vague repugnance to slavery, especially the flogging feature. I sternly prohibited this on my works, even among the slaves of contractors; and I am sure I had very much less insubordination and far better service than the lash would have afforded. And I am yet uncompromisingly opposed to corporal punishment, under any state of circumstances, whether in the home circle, the country schoolhouse or the so-called houses of correction, where juvenile waywardness attains graduation in crime. But I had been born and nurtured in the hotbed of slavery; and was southern, right or wrong, to the marrow of my bones; while the object in human shape dearest to my fond heart was old aunt Jemima, my "Black Mammy!"

The War-Cloud Breaks

The chilly fogs of early November mornings began to hover along the margins of the big ditches. The roof was on my house. I arose early and opened my mail, that came just before daybreak, one morning. There was no great bulk of mail; yet, that little bathed me in a breath of metaphorical polar wind, that, for the nonce, seemed to congeal me where I sat: it was the harbinger of the blackest, most portentous cloud of war that ever darkled over cultured intellect and refined civilization.

I suspended everything in the act, not permitting another stroke of work, dismissing carpenters, and starting hired slaves home with their overseers, without awaiting the pleasure of my kinsmen, well realizing what we all had to face, the ultimatum, having passed all bounds of truce.

Two hours later I was on the way to the railroad-station, to take a homeward-bound train; and never more saw that haunted

purgatory, wherein I had passed six fearfully expiating years.

There were excited people in the train and a hubbub at all the stations along the way, where the neighboring people were gathered, and war-discourses in vogue. I had little to say to anyone. I felt the chill of the death-knell to all my plans and hopes of life. It was vain and idle to expect concessions from the abolition-sentiment, whose consuming fire was enkindled in the northern mind; and it were madness to dream of any yielding on our part, short of becoming helplessly vanquished.

Coolheaded, thoughtful men among us—those who were dead or in the last ditch at the final climax—did not delude themselves with the shadowy phantasmagory of what was termed "fire-eating orators," that northern fanaticism would not fight it out to the death. They reasoned that there was no practical compromise short of emancipating the slaves and passing under abolition dominating rule, that was sure to enfranchise the slaves; and that the irrepressible conflict had to come, soon or late; and that it were better to have done with it at once, while there were fewer people to be slaughtered than there would be a score of years hence.

Such was the reasoning of men who began to prepare for war as reluctantly as the criminal dresses to go to the gallows; yet they were the most dangerous antagonists with whom the North would have to cope, dauntlessly resolved to sell their property and lives at a horrid price in northern blood and tears.

How strange it seems to me tonight, familiar as I am with all of the heart-rending agonies of that dreadful age of mourning, that men could deliberate in cold blood, with tranquil nerves, on the perpetration of that ghastly fratricide. I participated in such deliberations, with undemonstrative acquiescence, with the sentiments of a polished bosom suppressed, my personal destiny being indifferently flung into the seething vortex of my fair native land. And tonight I regard all that dreadful scourge as the legitimate fruit of the curse of slavery having been barnacled on to the constitution of American independence. Slavery was ever blessed by the churches and, if not propagated, then tolerated, by the governments of earth, in all time. And there is yet a curse on the slavery masqueraded in all nations under the gaudy insignia of popular liberty, whose people are the slaves of gold or other untoward circumstances of enthrallment.

(To be continued)

The Keystone of Success — Collections

By A. D. BRUSH, Chicago, Illinois

WHEN your patient is stretched out on the bed before you, "all in but his shoestrings," how much are your services worth to him, *then*? He would willingly pay tribute to his last cent before you even felt his pulse. But—when you've buckled in and coaxed him back into the game of life, lo! what a change! Your modest little statement of account goes by on the first of the month unheeded. Like Hamlet, "you live on air, promise crammed," and soon your debtor-client crosses to the other side of the street when he sees you coming. And does he tell people about how you "stood by" and pulled him through? Not he! The man who owes you money is your hardest knocker.

"But," you say, "I can not go after him too strong, or I shall lose his future patronage."

Right there you're wrong! The man with whom you are firm from the start is the man who will respect you to the end.

"Customers who keep their accounts paid up feel a certain satisfaction in dealing at that store. They are privileged persons, always welcome. But those who lag behind, feel an irresistible temptation to cross over to the other side of the street. So, it is not always so much a question of getting the money as of keeping the customer's conscience clear that prompts a credit-man to keep the buyers up to date with their bills." Sound, business common sense! Then, why is it not common sense for the medical man?

Do you want to enhance your position of dignity in your community? Do you want to discount your drug bills instead of being dunned for them? Do you want to pay off that mortgage or buy that "Cadillac Eight?" Do you want the local merchants to recommend you as "A-1?"

Then, do as other merchants do. *Make your debtors pay you first.* The very nature of your services is such that you have a stronger hold on your patients—a greater obligation, if you but make them see it—than any commercial account could possibly have.

Make your debtors pay you first! How? In the first place, reduce credit risks to a minimum. Next, adopt an intelligent, automatic, compelling, surer-than-death-or-taxes collection-system.

There are two rules for minimizing credit risks, to wit: Know thyself; and, know thy man.

You may fool yourself into the belief that it is your duty to furnish medical attention to everyone who requests it, without making any investigation, trusting to the good Lord to pay you hereafter, if you're not paid here. But—you entered the profession because you expected to make in it a living (maybe a little more) and a name for yourself. Your ability to do both is directly dependent upon your income. However, your income depends upon your business ability, and, medicine is your business; hence, you must avoid doing anything that involves a loss, that being "bad business."

You must adopt business rules, and live up to them. Don't get the reputation of being a "charity doctor." Even poor people *can* pay. And they can pay you better "per visit" than they can "in bulk" after continued sickness has exhausted the family income. Adopt the practice of saying; "It will be less expensive and easier for you to pay me at each visit, and I have a receipt right to hand." Always carry statements, note-blanks, and receipt-forms with you. Always leave your statement to rich and poor alike—at the completion of your services, arranging, if possible, right then for cash settlement, cash and note or all note. A note always is better than an open account.

Toward known deadbeats or habitual slow payers adopt a stricter attitude. "Cash first" should be your slogan in their case. Maybe you'll offend some of these, but you can afford to risk this, rather than lose money by them. And remember—their hides are thick. It's not so easy to offend these gentry as you think.

Know thyself! Lookout for "number-one!" Practicing medicine is business, and your diploma is an investment that must yield returns.

Secondly, know thy man! To the new doctor in a community, every one is a question-mark; to the established doctor, each newcomer is a question-mark. How can you find out as to the responsibility of all these people? The answer is simple: Be a merchant. The grocer, the butcher, the baker, all these soon find out; probably long before they're approached for credit accommodation. Nearly every town has its "Merchants' Protective Association," which exchanges credit information, gets reports on new ar-

rivals, lists undesirables, traces the "skips," and much more. As a merchant, you should be an active member of your local association. Then, if Jones has beaten the butcher out of his bill, you'll know of it and can treat Jones accordingly when he comes to you.

If there is no local merchants' association, make personal inquiries. Try the bank, his nearest grocer, and the druggist. Better yet (and here's a field for practical individual work), get your county medical society to make its own list, the information being furnished by the doctors of the county, for mutual protection. Secure all the information you can from common acquaintances, personal interviews, past record, and so on.

Credit information and its sources might be charted somewhat as follows:

Agency and merchants' reports indicate: Rating; business record; standing among your competitors; public position; ability.

Personal interviews develop: Character; personality; intentions; habits; hobbies.

Common acquaintances know: Ability; habits; standing; reputation.

Know thy man and handle him accordingly. Set the pace. Make him do business by *YOUR* rules; not by his rules. Get a line on every prospective patient, then you'll be prepared.

With the best of preparation, however, collections will lag unless your methods keep your patients whipped up. The public has heard the expression, "The doctor is no business man," so many times and has seen so many practical demonstrations of the fact that it is almost second nature with people to impose upon you. To remedy this, you must strike at the root of the evil—*be a business-man*.

System and Attention Are Prerequisites

It is not necessary to invest in a great deal of special office machinery to make your collection-system absolutely automatic. Many shortcuts are provided for the collection-manager whose accounts are numbered by the thousands, but for which the ordinary doctor will find little use.

If you carry ledger or card accounts, devoting a single leaf or card to a client; a correspondence file for holding letters and copies of your own, and an ordinary dated memorandum file, that will be ample for your collection followup. All that is necessary is to remember that no collection-system, however automatically arranged, will run itself.

You must set aside certain definite intervals for giving your attention to all accounts.

Whether this will be monthly, weekly, or bi-weekly will depend upon local conditions as well as on the information you possess as to each individual's financial status. Working-men who are paid weekly should be followed up weekly. Never should the interval be more than one month. In farming districts, where it is customary to let the doctor wait until crops are harvested and sold, notes should be insisted upon. These then can be discounted at the bank or otherwise negotiated. Every account should be regularly followed up until some definite settlement has been secured.

First let us determine, by means of a chart, exactly what is embraced in a collection-system—the various processes and the bases of appeal possible to each. By keeping this outline in mind and ascertaining the line of appeal to which each individual is most likely to respond, there is a chance to eliminate many false moves in the usual hit or miss style of procedure; thus saving collection expense by getting maximum results from the first steps.

A Routine Collection-Scheme. Dunning

1. Statements: Should be advised to get results on first presentation. Should be definite as to terms of payment. May be accompanied by novel reminders and should be accompanied always by return-envelopes.
2. Form letters; Personal calls; Phone calls: Keep the debtor regularly reminded. Must always be courteous though increasingly insistent. Appeals to personal traits revealed by past experience, credit reports, and so on. Such as, Reciprocity, Conscience, Self-esteem, Good fellowship, Friendship, Economy, Self-interest and Caution.
3. Work with attorney: Notice of intention to take action. Attorney's notices. Final appeal before suit. Suit for (a) judgment, (b) Attachment, (c) Garnishment. Supplementary proceedings. Notifying employer. Sending collector to wait.
4. Work with home associations: Threat of lost credit-standing through publication of debtor's name in list of delinquents. Legal work by Association's lawyer. Advertising account for sale.
5. Work with out of town agencies: Publication of debtor's name in a national rating-guide. Unusual procedures possible by working at a distance.
6. Novel, special, and persistent methods for striking at debtors, whose accounts are legally uncollectible, from new and effective angles.

The routine of collecting accounts is as follows:

We will assume that you are sending your first statement on the first of the calendar month following the date of service. Write

the statement with the open ledger or card before you. Then on the bottom line, over near the left-hand margin, write—if it is the 1st of May—the figures 5-1-15—1. (Signifying: May 1, 1915, No. 1.) This will designate that you sent the first notice on May 1. To make your first statement most effective, it should show definitely that it is payable upon presentation. The sentence "Accounts for services rendered are due at once on presentation of statement," printed on your statement head, will suffice. Or, to make it still more effective, the following, printed in small type across the face of the statement or else in larger type on back of it, might be used. (This may be set off by ink of a different color.)

A doctor's services, from their very nature, cannot be placed in the same class as ordinary mercantile accounts. In his attending the sick, every act constitutes an immediate expenditure of time, material, and knowledge, the two latter acquired and paid for long before being ultimately used. Therefore, ordinary business practices cannot govern a doctor's charges, and, so, accounts are due *when rendered* and prompt settlement is respectfully requested.

All your statements might contain this as an adopted standard. The idea is, to make the first punch count.

Along with your statement, you should send return-envelope and anything else that will assist in making it easy to remit. Make prompt payment appear the line of least resistance to your client.

The following form is copied from a recent issue of *The Illinois Medical Journal*. The slip is perforated along the dotted line, this is sent to the patient, the latter returning the small right-end section, together with his remittance, while retaining the other part for his record; in that way making it unnecessary for the physician to send a receipt for such mail payments.

At the expiration of the fixed interval, go over your ledgers, make out your regular statements and send them out. New accounts during the previous month start the new routine for those patients, while those who already have received the first statement, but have not paid, will get the second notice. This time, assuming that you have adopted a 2-week interval, repeat the date figures used in the previous bill, followed by a dash, and then write the new date 5-15-15-2; the 2 showing it is the second bill. This second statement (No. 2) should bear a legend somewhat as follows:

Undoubtedly you have overlooked this account. I shall greatly appreciate your prompt remittance.

If written with pen and ink, it will prove much more effective. If you desire, you can have made such a rubber stamp or your printer will supply printed gummed strips, which may be pasted across the face of the statement. But the main idea is, be sure to send it.

At the next period write the figures 6-1-15—3, after the former two dates, as before, with a dash between; this being your third notice. The tenor of this should be more insistent, although it is best still to assume unintentional oversight as the reason for nonpayment. You may write a note something like this:

Continued oversight is sometimes mistaken for intentional neglect, but I realize that my *two previous statements* may have been mislaid. I am confident, however, that you will appreciate the urgency of this request.

Step four should be a personal or a telephone call, or else a personal letter, timed, if you have that information, to arrive on your client's "pay-day." The date and the figure 4 should follow your former date-records on the account page. A good first letter would be like this:

.....Examination Special Home Visits Office Visits Night Visits Consultation Obstetrical Surgical Operations Surgical Dressing Microscopical Examination Chemical Examination Blood Examination Urine Examination	TO JOHN C. SMITH, M. D., DR. MARSHALL FIELD ANNEX 23 EAST WASHINGTON ST.	
	RETAIN THIS PORTION OF BILL FOR YOUR RECORDS NO RECEIPT WILL BE RETURNED ON MAIL REMITTANCES UNLESS REQUESTED AT TIME OF PAYMENT	
	FOR PATIENT'S RECORD PAID BY _____ CHECK NO. _____ P. O. ORDER _____ EXPRESS ORDER _____ BANK _____ DATE _____	CHICAGO _____ 191____ M _____
	FOR PROFESSIONAL SERVICES	
	FROM _____ 19____ TO _____ 19____ \$ _____	

TO JOHN C. SMITH, M. D., DR.
MARSHALL FIELD ANNEX
23 EAST WASHINGTON ST.

DETACH THIS STUB AND ENCLOSE WITH
MAIL REMITTANCE

MR. _____

\$ _____

I shall greatly appreciate it if you will step in and see early this week with reference to your unpaid account of \$——. This really deserves your immediate attention. If inconvenient to call, can you not send check or advise me by telephone definitely as to when I may expect settlement, so that I may arrange my accounts accordingly?

How are Mrs. Smith and those two fine boys of yours; well, I hope? I am always glad to see you, and am ever at your service whenever you may need help.

Yours very sincerely,

Letter or call number 2 is your fifth step, and the figure 5 should follow all your preceding notations, along with the date. Number your first letter "4" and your second letter "5," to correspond with the entry, and keep either a "master copy," for reference, or a carbon copy of the letter in your client's letter-file. Your second letter might read:

I am wondering why I have not heard from you in response to my letter of the —th. Probably you have been too busy. If you cannot call, I shall confidently expect a letter from you by return mail, as I owe some drug-bills which simply must be paid this week, and am depending upon your remittance to help pay them. Please, do not disappoint me.

Yours sincerely,

Your sixth step, or letter number 3 (don't forget your notation No. 6 in the ledger), should admit of no chance of further evasion. Be courteous and friendly, but at the same time definitely insistent. A form-letter, however, will suffice. By keeping your master copies always within reach and numbering them to correspond with your ledger notations, no carbons will be necessary. Write, this time, in this strain:

Knowing your customary promptness, I felt that there must be some definite explanation for your delay in taking care of the little account you owe me.

I have too much confidence in you to allow this to cause me any uneasiness, but I should like to know exactly what the trouble is.

I am, and always have been, ready to respond promptly to your call and to serve you to the best of my ability. Now, if you will be just as prompt to reciprocate, all will be well and your present negligence will not be held against you.

If you cannot pay the entire amount now, please send me as much as you can spare today, and let me know how much you will send every week till all is paid.

I shall confidently expect a definite adjustment of this matter before——.

Yours sincerely,

Should he make an indefinite promise, write him again, until you pin him down to a definite date. Say:

I thank you for your kind and prompt response, but, as you have given me no definite promise, I wish you would let me know exactly when I may expect to hear from you and how much you will be ready then to pay on account. You will readily understand that I need this definite information for

the correct handling of my expense accounts. Please, let me know by return mail, and oblige.

Yours sincerely,

It is here that your memorandum, or "tickler" file does its duty. When you receive a definite promise, make a note under the proper date, like this: "J. Jones promised me \$5.00 today."

A good tickler file may be made of an ordinary card index, each card bearing consecutive numbers for the days of the month. Memoranda, such as: "Write A. Smith today in re account," or, "Call F. Johnson at office today," or, "Jones gets paid today," are written on a slip of paper or card cut in size to correspond with the indexes. This tickler is filed behind its respective day. Each day the memoranda behind their respective index are removed and handled. Such a memo system can be used and extended indefinitely.

When your debtor does not keep his promise, write on the day after the one he agreed to pay:

Will you please advise me at once, whether or not you have sent the \$5.00 you promised you would send me yesterday. I have not yet received it, and if the remittance has been lost I wish to start investigation at once, while there still is time and opportunity to trace it. If you have overlooked this matter, I shall appreciate your immediate attention.

If no answer comes, you can then revert to the collection procedure fixed upon, having the matter come up for attention every week through your "tickler" file.

About this time you will be tempted to place the account with your collector, without further delay. Bear in mind, though, that it always is easier to collect an account before your attorney has had it in charge than after he returns it as uncollectable.

Go back over your collection-chart. Recall everything you know about the debtor. His strongest characteristic, be it conscience, friendship, caution, or other trait, will be his weakest line of defense. Direct your artillery against his fear of notoriety, self-interest, sense of honor, and so on. Then, if you know that he is hard up, suggest an easy-payment plan that will be mutually convenient—a dollar a week appeals to many. There always is *ONE* line of appeal which your debtor simply can not resist, and, with your intimate personal knowledge of your clients, you have a far better opportunity of finding the correct basis than the credit-man of the ordinary business concern.

If you decide to give the account to the attorney, first notify your debtor, and do it courteously. Let "continued courtesy under every provocation" be your watchword.

You can catch more flies with molasses than with vinegar. Tinge your letter with "regret" that he has forced you to take such action. Show him how it will be more honorable and how, at the same time, he can save annoyance and expense by a direct settlement. Then set a definite date upon which you will act. Then, keep your promise! Give the account to your collector on the day set! By acting promptly, you enhance the effect of your attorney's first notice. Write your letter something like this:

Serving the sick requires the greater portion of my time, so that beyond a certain point I cannot give my accounts my personal attention. Automatically all accounts which have reached a certain stage must go to my attorney for his attention.

I sincerely regret that you have allowed your account to reach this stage. I hoped that you would respond ere now to my repeated requests. A direct settlement will be of great mutual advantage, as my confidence in you will in this way be justified, while you will save the annoyance and expense of my attorney's procedure.

I shall be in my office every day from 10 a. m. to 2 p. m., in case you may wish to see me personally about this. Otherwise, I must take action on the 12th inst.

Yours sincerely

Your attorney will tell you, occasionally, that you will have to sue a certain debtor. Nearly every man will avoid suit if the chance is given him to pay in small installments. Consequently write him like this:

My attorney tells me that I shall have to sue you if I expect to secure my account against you. I do not believe this.

First—I think you have too much good, common sense to allow anyone to drag you through the annoyance and notoriety of court procedure.

Second—Your own interest will argue against allowing court costs, attorney's fees, and so on, being added to this little bill, as they most surely will be if you permit this to come to trial. You could not afford to have your wages garnished.

Third—You are too honorable, in my estimation, to compel me to gain by force of law what you acknowledge as a just debt that should have been paid willingly long ago.

So, while I have told my attorney to go ahead if he doesn't hear from you by the 15th inst., I am sure that you will see the great advantage of an immediate, direct settlement.

I am willing to accept small regular part payments if this will be of any convenience to you. I hope you will not force me to take harsher action.

Yours very sincerely,

International Collection Agencies. Threats

It is well to ally yourself with some international collecting and reporting agency. Being at a distance, they can appeal to your debtor from different angles, showing him their almost unlimited resources of cooperation with other creditors, publishing his name in an international list of delinquents,

sharp work through local representatives, justices of the peace, and so on. The National Rating League of Chicago cooperates with business men and publishes a "Red Guide," which is very much in favor. Such agencies are much more experienced and better equipped to handle this kind of work than you are, but, if you should try the effect of personal coercion, do not overstep the limits prescribed by law. Watch these points: Libel; blackmail; postal regulations; statutes of limitations.

Under no circumstances, ever write "duns" or threats to sue on a postal card, for it is against the law. Be wary of making any derogatory statement, direct or indirect, in your letters. Avoid abusive or threatening language. Blackmail is defined as "extortion by intimidation, especially extortion of money by threats or accusation." Libel is, "any statement published without cause or excuse, either in print or writing, tending to expose another to public hatred, contempt or ridicule." The fact that your statements may be true does not alter the case.

Statutes of limitation prescribe the legal limits within which you may sue a debtor or *threaten him with suit*. The time varies in different states, and the limitations on open accounts, notes, and judgments also differ. Your attorney will set you right on these points. No suit for debt lies after the legal period of limitation is exhausted.

While the statutes of limitation limit the time within which you may sue or threaten suit, they do not affect your right to request payment of any account, no matter how old. So, never let an account die, even if it is outlawed. Keep it ever green in your debtor's memory. Every time you send out a general letter, see to it that your oldest delinquents receive it as well as do the "fresh crop bad-pays." If your letters always are courteous, you stand a much better chance of eventually shaming your debtor into paying.

New ideas as to procedure continually will present themselves. The only way to find out their actual value is to try them out. The prevalent notion that accounts depreciate with age is wrong. The longer an account runs, the more of an investment does it represent. Interest and collection expense increases its value to you each year. For this reason you never should compromise for less than the face value of the account. Quite frequently a statement showing the accumulated interest added is the most effective way of making plain to the debtor that it is best for him to pay without further delay.

Dental Malocclusion

Receding Chin and Prognathism

By RALPH ST. JOHN PERRY, M. D., Minneapolis, Minnesota

EDITORIAL NOTE.—This article is another installment in Doctor Perry's series on "Cosmetic Surgery." The subject discussed is one which has rarely been brought to the attention of the medical profession. It nevertheless is of such exceeding importance that we feel sure every reader of this journal will read it eagerly and ask for "more."

DENTAL MALOCCLUSSION

MANY who have been interested in phrenology and face reading have heaved large, deep sighs because their receding chins advertised them as individuals of weak will-power or because protruding jaws gave them a pugilist's aspect. As a matter of fact, chins are very likely to mislead; for, a careful study of mandibular conformation discloses that the position and the shape of the chin are dependent upon the occlusion, or putting together, of the teeth, excepting, of course, in a few cases, where a traumatism or some disease has entered as a factor.

The etiology of defective occlusion—or malocclusion, as we shall hereafter call it—has been, as it is now, well studied, and such troubles no longer can be attributed to heredity or to some obscure eccentricity of development. The primary causes have been recognized, and we now know that aggravated cases of malocclusion are the consequence of the neglect of, and failure to remedy, these initial wrongs. Cases once looked upon as owing to heredity we now consider as resulting from a similarity of environment, a sameness of diet, and a duplication of parental habits.

Presumably every infant turned out from nature's workshop comes forth a perfect product, finished and complete, as babies should be at birth, and containing within its body all the embryonic tissues and rudimentary organs essential to its further growth and development. Sometimes nature slips a cog in its mechanism, and an imperfect or defective baby results; still, it can be said that as a rule nature's work is perfect. This being true, most of the deformities and disfigurements must be attributed to influences brought to bear upon the child after its advent into this world.

Forces Producing Normal Occlusion

In the study of malocclusion, we have found that certain forces influence and bring about normal occlusion, and these have been tabulated, as shown below, and here enumerated in the order of their appearance

during the period of development of the dental apparatus.

1. Normal cell metabolism.
2. Muscular pressure.
3. Force of inclined plane.
4. Normal approximation contact.
5. Harmony in size of the arches.
6. Atmospheric pressure.

Normal cell metabolism is the proper development of those cells which are involved in the eruption of the teeth and the development of the surrounding parts, and is the first force which influences the teeth to assume their correct positions in the dental arches.

Muscular pressure, the restraining and quieting force of the buccal, labial, and lingual muscles, tend to keep in correct alignment any teeth showing a tendency to deviate from the normal line of occlusion. Should a tooth tend to grow too far toward the tongue, the lingual muscular pressure acts to push it back into line; should the tendency be toward the cheek or lip, those muscles exert their corrective influence. This muscular pressure, though very gentle, is constantly exerted and eventually effects its purpose.

By the force of the inclined plane, is meant the tendency of the irregularities of the articulating, or occlusal, surfaces of the teeth (the cusps, grooves, sulci, and fossæ) to fit into each other. When the teeth are first erupted, they do not exactly fit into each other, but the function of mastication soon brings the surfaces into opposition, and the inclined planes cause the teeth gradually to occlude as they should. If, however, through some mischance, a tooth be diverted from the normal line of contact and its inclined planes fail to meet correctly those of its opposing tooth (or teeth), then the tendency of the force of the inclined plane is, not only to aggravate the malposition of that particular tooth, but to bring about malocclusion of other teeth.

Normal approximal contact is the term applied to the intercontact of the teeth in the same dental arch. The inclined plane is a force involving the two arches; this involves

only the relations of one tooth with the others in the same arch. It is reasonable to assert that every tooth must have enough room in which to stand, and that its cutting or grinding surface should be in proper position in the line of occlusion, or "bite." Should its space be encroached upon by adjacent teeth, we find an abnormal approximal contact, whence the tooth is forced to erupt out of line, become twisted in its canal or is projected forward or backward. Such a tooth can very easily influence others to go wrong later on.

Harmony in the size of the arches means that the teeth in the two arches are so arranged that when the jaws are brought together the line of contact is equal in both arches. Should there be a missing tooth or one so far out of line as not to come within the bite, or when a part of the proximal portion of a tooth is lost through decay or injury, it can readily be seen that there exists an inequality, or asymmetry, that will bring about a defective occlusion.

Normal atmospheric pressure is that pressure brought to bear upon the parts during normal respiration and swallowing, not alone in the nose, but in the mouth and in all the accessory sinuses. Atmospheric pressure is an important factor in the normal development of the nasal cavity and the superior maxilla, and, hence, directly affects the size and shape of the upper dental arch.

When these several forces of occlusion work in harmony, we have a normal occlusion, as shown in Figure 1. Should any one force or any two or more in combination be absent or perverted, there at once arises a condition which results in a malocclusion. From these half-dozen forces, there are possible some fifty-eight variations and defects.

Etiological Factors of Malocclusion Classified

The etiological factors playing upon these forces have been classified as follows:

A. Constitutional:

1. Early loss of decidual teeth: due to rickets, syphilis, scarlet-fever, measles, chicken-pox, and fevers accompanied by a high temperature.
2. Tardy eruption of permanent teeth: due to poor nourishment and deficient calcification, improper food, wrong kind of food, loss of mastication because of improperly prepared food, with the resultant nonuse of the teeth.
3. Loss of permanent teeth: due to disease or to drug action.

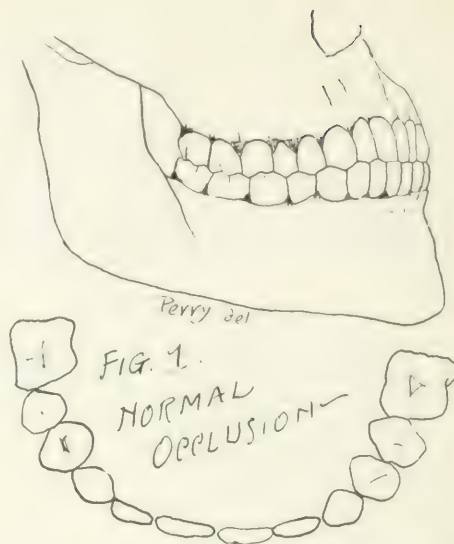


Fig. 1. Normal occlusion. Upper figure from skull. Lower figure shows normal alignment of teeth in the arches.

B. Local:

1. Early loss of deciduous teeth, due to decay and extraction.
 2. Improper restoration of contour, size, and so on, of decayed deciduous teeth.
 3. Early loss of deciduous teeth, due to injury.
 4. Loss of mesiodistal diameter of teeth.
 5. Early loss of permanent teeth, due to local disease.
 6. Early loss of permanent first molar.
 7. Mouth-breathing, due to adenoids.
 8. Enlarged and inflamed tonsils.
 9. Nasal obstructions; polypi, ethmoiditis, enlarged turbinates, catarrhal conditions, and so on.
 10. Habits: lip biting, lip sucking, tongue protrusion, tongue pressure, thumb and finger sucking.
 11. Tongue-tie and atrophy or hypertrophy of the tongue.
 12. Sore teeth, causing faulty mastication.
 13. Loss of a portion of the jaw-bone, either superior or inferior maxilla.
 14. Temporomaxillary arthritis, either acute or chronic, and the sequelæ.
 15. Cicatricial contractions.
 16. Tumors about the maxillary or oral regions, the location of which interferes with normal occlusion.
 17. Early loss of permanent teeth through traumatism.
- Malocclusion may involve the entire dental apparatus, parts of it or only the individual teeth. In the latter cases, we have several varieties of displacement, which, if explained

here, will materially help in understanding what is to be said later.

The teeth are divided into right and left by the median line of the body—a well-known and long-established anatomical landmark; and in my work all relations of the teeth are spoken of with the median line of the dental arch as a "base line."

Technical Terms Defined

The following definitions may not come amiss:

Mesial: in the direction of the median line of the arch. A tooth which is too near the median line of the arch is said to be in mesial occlusion. (Figure 2.)

Distal: away from the median line of the arch. A tooth too far away from the center of the arch—toward the angle of the jaw—is in distal occlusion. (Figure 2.)

Labial: toward the lips. (Figure 2.)

Buccal: toward the cheek. (Figure 2.)

Lingual: toward the tongue. (Figure 2.)

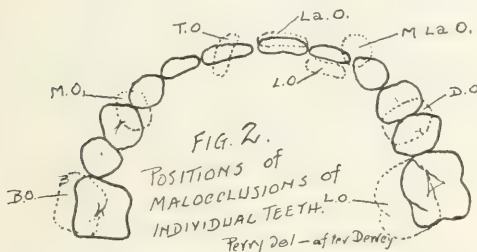


Fig. 2. Positions of malocclusion of the individual teeth. Solid lines show the normal alignment; dotted lines indicate abnormal positions. B. O.—buccal occlusion; M. O.—mesial occlusion; T. O.—torso occlusion; La. O.—labial occlusion; L. O.—lingual occlusion; M. La. O.—mesiolabial occlusion; D. O.—distal occlusion; L. O.—lingual occlusion.

Infraocclusion applies to a tooth that is too short, which has not erupted sufficiently and the surface of which does not reach the line of occlusion. (Figure 3.)

Supraocclusion signifies that the tooth is too long and its surface projects beyond the line of occlusion. (Figure 3.)

Torsiocclusion means that the tooth does not occupy the proper axis in line of occlusion—is twisted. (Figure 2.)

We may have combinations of these several positions, the tooth having from two to four malpositions united to form a malocclusion. A malocclusion of one tooth occurring in early childhood will so affect other teeth that eventually the entire jaw may become involved; and so common has this condition become that, when we now speak of malocclusion, the term generally is understood to apply to those troubles involving the entire dental paraphernalia.

With this understanding, as explained, I have undertaken a classification of the various types of malocclusion, one which embodies the features promulgated by several surgical and dental authorities on this subject, while, yet, disagreeing in some points with a few of them. My effort has been more to produce an analytical key from already known data, such as we have in zoology and botany, rather than to complicate matters by introducing new terms, names, classes, or types. With the hope that it may be of some help in diagnosing these troubles, this offering is made of the Analytical Key to Malocclusion here shown.

In this key, there are retained certain terms which have become established by usage and priority, although I believe the use of descriptive, generic, and specific names would be more appropriate. The argument, often advanced, that the laity would not understand such terms counts for nothing, as the key is for the use of students and practitioners in their work, and not for the laity. As it stands now, "in plain English," it is cryptographic, and the doctor has to go into detailed explanations to get a lay person to comprehend what is meant by, for example, a Class I Type 2 condition. By using in the key capital and italic letters and Roman and Arabic numerals, it is possible to designate any possible malocclusion by means of an abbreviated description, as, A I 2 or B I L M 2.

An Analytical Key to the Varieties of Malocclusion

Deformity involves both sides of the jaw:

A. BILATERAL

Deformity involves only one side of the jaw:

B. UNILATERAL

A. BILATERAL

Mandible in normal relation to superior

maxilla.....CLASS I

Mandible in distal relation to superior

maxilla.....CLASS II

Mandible in mesial relation to superior

maxilla.....CLASS III

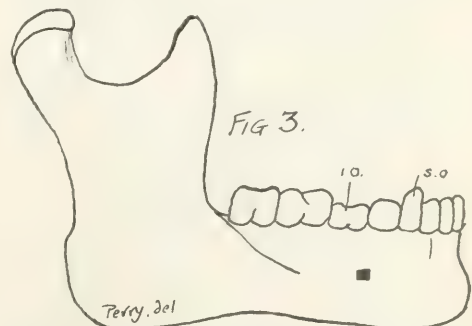


Fig. 3. Positions of malocclusion of the individual teeth. I. O.—inferior occlusion; S. O.—superior occlusion.

Mandible in crossed relation to superior maxilla (one side distal and the other mesial, with a cross bite at the incisorial region).....CLASS IV

CLASS I

Upper incisors in mesial occlusion to lowers; occasionally a few or all of the canines may be distal; upper molars and premolars may be in lingual occlusion with lower apposing teeth on one or both sides. The anterior teeth are "bunched".....Type 1

Upper incisors in mesial occlusion to lowers; molar and premolar relations normal; both upper and lower arches narrow. Patient presents history of mouth-breathing or lip habit.....Type 2

Upper incisors in distal occlusion to lowers and "bunched," with an undeveloped pre-maxillæ region.....Type 3

CLASS II

Upper incisors protruding; upper arch narrow; upper lip short; chin undersized; mandible undersized; muscular pressure abnormal; atmospheric pressure abnormal; mouth-breathing.....Type 1

Upper incisors retruding and bunched; upper arch nearly normal in size; mandible normal in size; muscular pressure normal; atmospheric pressure normal; breathing normal.....Type 2

CLASS III

Upper and lower teeth present an even alignment; no torsio-occlusion; upper and lower arches correct in shape; muscular pressure normal; atmospheric pressure normal; breathing normal.....Type 1

Upper teeth in even alignment with little or no torsio-occlusion; lower incisors bunched, with lingual inclination and in lingual (distal) occlusion to uppers; mandible only slightly overdeveloped; muscular pressure normal; atmospheric pressure normal; breathing normal.....Type 2

Upper incisors bunched and in distal occlusion to lowers; lower teeth in good alignment; upper arch under-developed; premaxillæ undeveloped; mandible overdeveloped.....Type 3

CLASS IV

Right side of mandible in mesial and left side in distal relation to superior maxilla:

Subclass, *Dextro-Mesial*, DM

Right upper incisors mesial, left mesial.....Type 1

Right upper incisors mesial, left distal.....Type 2

Right upper incisors distal, left mesial.....Type 3

Right upper incisors distal, left distal.....Type 4

Right side of mandible in distal and left side in mesial relation to superior maxilla, Subclass, *Dextro-Distal*, DD

Right upper incisors mesial, left mesial.....Type 5

Right upper incisors mesial, left distal.....Type 6

Right upper incisors distal, left mesial.....Type 7

Right upper incisors distal, left distal.....Type 8

B. UNILATERAL

Right side of mandible in normal occlusion with superior maxilla.....CLASS I

Left side of mandible in normal occlusion with superior maxilla.....CLASS II

CLASS I

Left side of mandible mesial to superior maxilla.....Subclass LM

Left upper incisors mesial to lower.....Type 1

Left upper incisors distal to lower.....Type 2

Left side of mandible distal to superior maxilla.....Subclass LD

Left upper incisors mesial to lower.....Type 3

Left upper incisors distal to lower.....Type 4

CLASS II

Right side of mandible mesial to superior maxilla.....Subclass RM

Right upper incisors mesial to lower.....Type 5

Right upper incisors distal to lower.....Type 6

Right side of mandible distal to superior maxilla.....Subclass RD

Right upper incisors mesial to lower.....Type 7

Right upper incisors distal to lower.....Type 8

There is a bare possibility of, at first glance, confusing a malocclusion with simulating conditions. A very thick protruding lower lip, owing to hyperplasia, may give the chin a receding appearance when in fact it is normal. So, too, may an ensemble of thick lips and a large, bulbous-pointed nose. Labial ectropion or entropion, from any cause, will have a reflex cosmetic effect upon the chin. Tumefaction of the point of the chin (soft part) or a long growth in the median portion of the body of the mandible will give the appearance of prognathism.

Corrective Cosmetic Operations

Many persons come or are referred to me for correction of receding chin or protruding jaw; more for cosmetic reasons than otherwise. Public opinion, backed by years of tradition and phrenology and pedantry, still relegates the owner of the distal mandible to the weakly and inefficient class and persists in regarding the wearer of the mesial mandible as a brutal creature of low instincts, a criminal or near-criminal. Such relegations are not justified; and what is more natural than

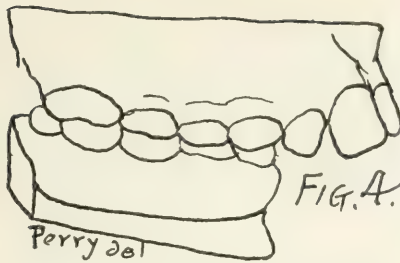


Fig. 4. Teeth project beyond line of occlusion

that those who are thus imposed upon should seek relief in a cosmetic operation?

Most of these people have become so habituated to their malocclusion that they tolerate whatever inconvenience or discomfort there may be in connection with mastication and speaking. The treatment of these cases depends upon the nature of the malocclusion and may vary from a simple connective appliance to the rather formidable operation of osteotomy upon both rami of the inferior maxilla, followed by wiring the two dental arches in as nearly a correct occlusion as possible. Before presenting cases which have been given typical treatment, I want to recite the story of two cases which present rather unusual features because of unexpected results.

Various Operations Illustrated

Case 1. William D. At the age of 16 years he presented a normal, healthy appearance, except for a slightly receding chin. A horse of erratic disposition kicked William

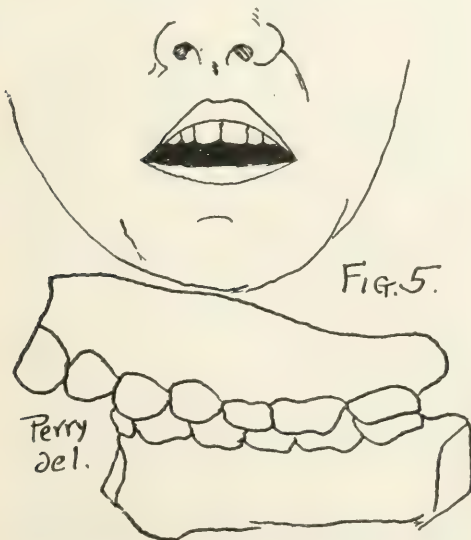


Fig. 5. Condition found in case No. 4

under the chin and caused a compound fracture of the lower jaw, one break on each side of the mandible, and the two about equidistant from the median line. The fracture was treated after the method then in vogue and in due course of time William was discharged as being completely repaired; but, oh joy, the surgeon, in setting the jaw, had advanced the chin, and now the boy no longer was a "weak-willed" Willie, but a husky, lively Bill. William, now at the age of forty-

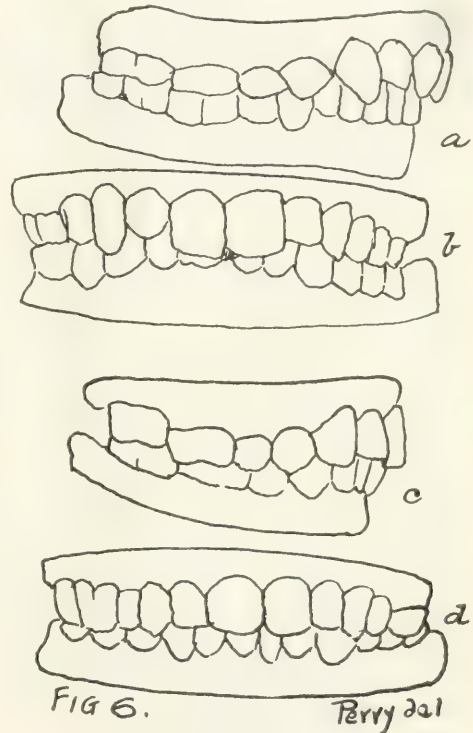


Fig. 6. Illustrating case No. 5.

plus, is an officer in the U. S. Army, and no one would suspect that years ago he was the unhappy owner of a receding chin.

This example of unintentional repair of a malocclusion furnished the precedent and inspiration for several cases in which an osteotomy was done for the purpose of repairing a condition too far advanced to be remedied by appliances.

Pulled Out "The Whole Jaw"

Case 2. Miss K., aged 12 years. Referred by Dr. A., a dentist, for curetment of a necrotic lower maxilla. It being desirable to extract a tooth in the necrosed area, Dr. A. applied the forceps, and not only extracted the tooth, but the entire ramus and posterior

third of the body of the mandible with it! After recovering from the shock of this unexpected occurrence, an examination was made of the necrosed parts and its cavity, and it was discovered that the bone apparently had "shelled" out of its periosteum. At that time (1885) our ideas about treating necrosis were somewhat hazy and, remembering Lewis Sayre's successful methods in orthopedic work, the cavity of the periosteum was gently packed with fine oakum. Antiseptic surgery was in its incipency and our technic was crude; nevertheless, this case went on to a good recovery. A few weeks after the initial experience I went abroad, the patient was left in charge of the dentist and lost sight of. Some fifteen years thereafter, while I was on a visit "back home," a rather comely young lady accosted me on the street.

"Why, how do you do? Aren't you Doctor Perry?"

"Yes, madam," I answered rather warily, as a modest man should when visiting his old "stamping-grounds" and accosted by strangers.

"You don't remember me, do you? I'm Miss K. Don't you remember the little girl whom you pulled the whole jaw out of? Well, I'm the one."

And a closer scrutiny revealed that she was. The necrosed portion of the mandible had been replaced by a fairly good growth of bone-tissue, there was good joint action and, while the mandible was underdeveloped, there was a satisfactorily working occlusion. Naturally, there was some disfigurement, but not sufficient to be markedly noticeable. Frankly, I was amazed at the result and could not but think how good nature had been to the girl and her doctors.

These two instances are here cited, because they exhibit what I call "results without intent," they show what has been done under unexpected and adverse conditions, and serve as examples which should encourage us to attempt to remedy even the most unpromising conditions that come to us. They date far enough back, having been under observation for over thirty years now, to show that the results secured were permanent, and not affected by later changes in life.

A Mouth-Breather

Case 3. B. K., aged 10 years. This child presents the usual aspects of a mouth-breather. The dental arches are narrow; upper incisors are protruding, as shown in

Figure 4, drawn from a cast;* the molars are in normal relation; has enlarged tonsils and adenoids. The tonsils and adenoids were removed and treatment with orthodontia appliances was begun, traction being exerted by means of expansion-arches, rubber bands, springs, and so on, in order gradually to draw and force the upper incisors backward, the lower incisors forward, and both upper and

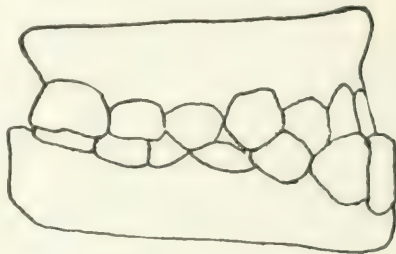


FIG. 7 Perry del.

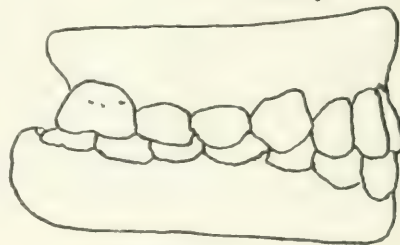


Fig. 7. Illustrating case No. 6

lower molars and premolars outward. These forces work so gently, insidiously and constantly that no inconvenience was felt after the first few days and in a few weeks the teeth had so far improved that the patient had lost the mouth-breathing appearance.

Case 4. T. D., aged 18 years. This person presents an aspect as shown in Figure 5, and is classified as A. II 1. (Work that out in the key.) An examination of the several associated cavities showed adenoids and nasal polypi. These were removed and then my dental associate fitted the necessary orthodontic appliances, to correct the malocclusion. Figure 9 shows how these arches, bands, and so on, were applied.

No absolute rules can be laid down for the treatment of these cases, as each one differs from all the others. One must learn the general laws covering the mechanics of orthodontia and then make the appliances to fit the individual. The successful operator coaxes

*In this and other cases, photographs are not used, because the identity of the patient is private property and may not be disclosed. All illustrations showing features are purely conventional and entirely impersonal.

rather than forces, and coddles rather than drives; he considers the comfort and convenience of the patient, as well as the needs of the teeth, and the appliances when fitted into place cause only slight discomfort, which wears away in a few days as the patient becomes accustomed to the new order of things.

Case 5. Miss B. L., aged 20 years. A case of A. II 2. The casts *a* and *b* in Figure 6 show that the upper teeth not only override the lower too much, but that the incisors are retruded. Hence, it becomes necessary to draw both the lower teeth and the upper incisors forward. This was done, and the final result is shown in casts *b* and *c*, Figure 6, where it will be noticed that the upper incisors are in proper alignment in the arch and the lower teeth have been brought forward by moving the entire lower arch mesially.

A Case of Prognathism

Case 6. K. L., aged 20 years. A case of prognathism (A. III 3.), the mandible being slightly overdeveloped and the upper incisors bunched, and in lingual or distal occlusion to the lowers as in Figure 7. Here the problem is, to move the lower teeth backward, which is accomplished by first directing all of the force against the molars and premolars until they have been reset in their new position, after which the force is reversed, so as to draw the canines and then the incisors back into alignment. The entire set of teeth cannot be moved *en bloc*, but by moving the molars backward a space is provided

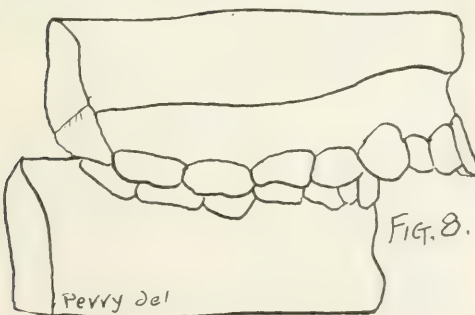


Fig. 8. Case No. 7 illustrated by casts

mesially into which the canines are drawn, while into the space left by the canines the incisors are drawn. This is done on both sides of the mandible at once, and at the same time the upper teeth are brought into alignment and the arch is expanded.

When the two arches harmonize as nearly as possible in size and contour, it will be found that a very good occlusion will have been

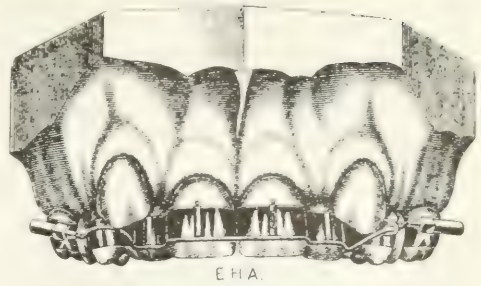


Fig. 9. Shows the application of an angle-appliance.

secured, the prognathism reduced and the growth of the premaxillae stimulated to normal. In these cases, as in all others where teeth are moved, the patient must wear a retention-apparatus for some time after the corrective appliance has accomplished its work—long enough for the forces of normal occlusion to become effective.

Correcting a Receding Chin

Case 7. J. S., aged 35. This man was just awakened to the fact that something can be done for his receding chin and insisted upon having it done. His cast showed an extreme case of A. II 1. (Figure 8), one that would require months of tedious treatment with appliances, because of the age of the patient and the solidity of the setting of his teeth. Also, the patient demanded immediately visible results. Here the lesson learned from Case 1 (q. v.) and from others similar came to mind, so an osteotomy was proposed and readily accepted. Osteoplasty of the mandible for cosmetic purposes has undergone much development within the past two decades; in this case, the separation was made subcutaneously through both rami as follows:

With a blunt-pointed, long, curved perineum-needle or a needle made especially for this purpose, a strong silk cord is passed around the inner side of the ramus on a level and in line with the occlusal surfaces of the lower teeth. To do this, a small incision is made through the skin at a point just over the posterior edge of the ramus in the line of the proposed osteotomy. Through this opening, the needle is carefully pushed until it slips around the edge of the ramus, then its direction is changed so as to carry it forward across the bone, all the time hugging the bone closely, to avoid puncturing the buccal mucous membrane and to include as little as possible of the soft parts within the loop. Should the needle point puncture the buccal membrane, retract it a little and then start ahead again closer to the bone. The blunt

point of the needle will tend to prevent puncturing arteries, veins, or nerves; the curve in the needle enables one to work a way around the bone and close to it, and, if aided by a finger in the mouth, the cord can soon be put in place. Having succeeded on one side, put a cord in place upon the other side before proceeding farther with the operation.



Fig 10. Showing case of malocclusion, uncorrected.

Returning to the first side, over each end of the cord pass a small silver (or metal) tube which is just large enough to permit a Gigli or chain saw to pass through its bore. To one end of the cord fasten the saw and draw it through one metal tube, around the bone, and out through the second tube. The tubes are to be held firmly against the soft parts by an assistant, and not only guide the saw, but, just as important, prevent the buccal soft parts from undue injury and so prevent the formation of a disfiguring cicatrix.

Having sawed through one ramus, the procedure is repeated on the opposite side. When the osteotomy is completed, the anterior portion of the mandible is brought into the best possible position and held there by wiring the upper and lower teeth together, using dental wire (usually German silver or brass) for this purpose. This advancement leaves a V-shaped gap at the site of the osteotomy, which is closed by the formation of a calous, as in fractures. To maintain the rami and body in correct relation, a splint

dressing is applied. The case is treated thereafter as a fracture of the mandible.

This operation, while seemingly a formidable one for the disfigurement, is one which has given good results. The point selected for the bone section is one which gives the most satisfactory occlusion and joint action in the final result; the soft parts, arteries, veins, and nerves are severed at a point where the prospect for their postoperative union is best; and the wounding of the skin is reduced to a minimum, with consequent minimum scarring. The time required for recovery from such an operation is from four to six weeks.

Frequently the question is asked, When should a case of malocclusion be brought for treatment, and to this I answer, Just as quickly as possible after the malocclusion is noticed. If treatment is begun in the very incipency of the perversion, a great deal of trouble is "nipped in the bud," for, every day,



Fig. 11. Same case as in Fig. 10, after correction.

every hour of postponement means a growth of the deformity, an aggravation of the defect. There should be no waiting until the permanent teeth have erupted, since by that time the jaws have reached a stage in their growth and development which renders it more difficult and prolongs the time necessary to se-

cure results. Too long delay may render necessary an osteotomy.

Figures 10 and 11 show the "before and after" of a case treated by my friend Doctor Mendell, in which treatment was begun when the patient was four years of age. The child was a mouth-breather, adenoidous, with a set of anterior teeth much like those shown in

Figure 4. The results are shown in Figure 11, taken when the child was a few months older, at which time there had been established a normal occlusion for a child of that age. This child has now reached the age of 14 years, the permanent teeth are well erupted, and the occlusion at the present time seems to be normal.

The Evolution of Fee Division

By J. G. WALKER, M. D., Iola, Kansas

EDITORIAL NOTE.—We do not endorse the position taken by Doctor Walker—neither do we condemn it. We simply present this phase of the problem of fee division for the free, open and impartial study and consideration of our readers who are interested in the matter from the standpoint of the general practitioner, who usually is anxious to give and anxious to get a "square deal" for everybody.

THE newspaper comment nowadays over the doctors' quarrel as to who has earned and who shall have the money, and the appeal that is being made to the laity of fraud on the part of the trusted family physician in the guise of a friend, calls for a statement of more than the surgeon's side of it, in order that the observer may arrive at a correct and just conclusion.

Only a few years ago there were but very few surgeons, and they were in the cities and were developed in connection with the hospitals and medical colleges. Those surgeons charged as much as they could get—often exorbitantly—and it all went into their own pockets. The family physician made the diagnosis and persuaded his patient that an operation was the best and safest, if not the only, way out of the trouble. He selected the surgeon (and if the family physician is not the most competent person on earth, after knowing his patient for years, maybe, and studying his condition, to select the surgeon to operate, will somebody tell us who is?); and then this family physician was dragged along, to carry the responsibility for having selected the best surgeon and insure safety on the way and through the ordeal, in return for all of which he was recompensed for his expenses incurred and, maybe, an extra five-dollar bill for "gratitude"—but, more often, not. In other words, the dear family doctor was expected to be a "good neighbor," and to look for his reward in the Hereafter.

However, the patient willingly "whacked up" to the "famous" city surgeon anywhere from \$100 to \$500, or more, cash on the day of the operation, often even borrowing or mortgaging his property to enable him to do

so. And it all went down in the surgical hog's pocket. And that was less than two decades ago. Then, if the patient came off with his life and a whole body, he had a less regard for his family doctor, because of his failure to cure him with physic, and proportionately exalted respect for the "big surgeon." In fact, he was even a little proud and was being looked up to in the town and would tell, when the good doctor's ear was near, that he did not begrudge the big surgeon the \$500 a bit, then straightway proceeded to inform his gaping friends just what his trouble had been, at the same time baring his scar for the envious to wonder at.

Is it surprising that candidates for medicine aspired to surgery; a wonder that a young crop of surgeons grew up, to divide the business and the spoils with the jealous old tribe of surgeons?

Only fools teach to others what only they themselves can do. But too late now. The public does not know it; we of the profession, though, do know that ten and more years ago these old jealous surgeons began, in season and out of season, to hammer into the students on the benches a realization of the sinfulness of the division of a fee—"paying commission" was their favorite term. And the students did not dare talk back, as they wanted their diplomas just as much as their specialist professors and surgeons wanted them to send in to them fat-pursed patients, and wanted big fees, yes, and the whole loaf, too. Then, if those anticipating to engage in general and country practice nodded assent, as it were, in the pew, there was a hubbub of dissent in the undertone of the lobbies, and even the internes and the surgeon's assistants under the very noses of

the surgeons said the family physician should share in the spoils of the surgical case.

When the Young Chaps Came In

First thing, young surgeons sprang up and located in the cities and also many in the smaller centers. The latter, especially, began to curtail the surgical supply to the older established surgeons. The young surgeons did not charge so much, and they said to their classmates in general practice, whether in city or in country: "We will do this operation together. It is your case: you assist me and help me in the after-care; or you take full charge of the latter, and we will share the responsibility and do the work for a certain sum agreeable to the patient, in which case we will share the profits in a certain ratio."

Now, the public can easily comprehend that young men from the same or different schools naturally would do this. And it was not long until some of the older family physicians began to turn their cases from the famous city surgeons of the past to these young surgeons; for, the older, exactly like the younger, family physicians recognized that the young surgeons did good surgical work, and in the nature of things must supplant the older men. And no one informed will dispute the fact that some of the best surgeons are yet young in years when they execute their brilliant work.

Furthermore, these men saw that the total charge to the patient was less, even though they got a part of it, than when the jealous old surgeon pocketed the whole thing. And, so, from a sense of self-preservation, the big surgeons grew more bitter and began to talk ethics and fraud and to appeal to the public and the legislatures.

And evils did arise; for, doctors were human before they were doctors, and there doubtless were surgeons who bought as well as physicians who sold patients. And in so far as the fight has saved the public from this, thanks to the few jealous surgeons. No credit is due them, though, for they were prompted solely and exclusively by self-interest.

It is a well-known fact in the profession that some of the famous surgeons who are leading the fight against sharing of fees sent out advertising in disguised form and gave commissions when they were building their reputations. Now these same men want the practice stopped. The reason is patent.

Therefore, many physicians have changed their point of view, and it is neither a com-

mission nor a secret splitting of fees. The general practitioner now says it is *his* case all the way through, and tells the patient so; and after the diagnosis is made and an operation agreed to the attending physician he selects and hires the surgeon as would a contractor—a carpenter, if you please—and the family physician presents a bill in total, which covers all the expenses and fees, his own included.

Now, is it fraud, or immorality, or anything else unsavory for the physician to handle the money part of the transaction, and to hire and pay the surgeon who, in his greatest specialization, is nothing more nor less than a mechanic with a kit of tools? The best of them boast that they are not diagnosticians, but that their business is, to perform operations.

A certain physician who inherited wealth and turned banker said, after an experience in both professions, that he was surprised to find people were much more concerned as to who should care for their money than who should look after their health. And in this case the surgeons are trying heart and soul to make the public believe that the family physician is competent to diagnose the surgical lesion; and also a good man to steer his patients to the surgeon, give comfort and assurance that all will be well, share or shoulder the responsibility, give proper credit to the surgeon in case of recovery, and, if death happens, to take the blame, in the home town, with the relatives and friends of the deceased who always are near to remind him of his bad judgment. Nobody but a physician knows what this means—but, let the surgeon take the "wad."

Then they throw to the physicians the sop—and they catch some of the "suckers," too—that they (the said family doctors) are grossly underpaid, and that the physician should be man enough and should have the nerve and self-respect to present an adequate bill for services, including remuneration for his time, diagnosis, treatment, expenses, and after-care, such as are connected with and leading up to and including the operation and final recovery.

But, after the surgeon has taken the wad, and after the patient has paid to everyone involved more than he should have paid and would have been obliged to pay had he trusted his family physician all the way through, instead of assuming him a rascal, as touching his purse, the family physician, oversympathetic, says, "You have paid a big bill and borne heavy expenses," and then

names a nominal, absolutely inadequate fee. And then even he may carry that fee on his ledger until the book wears out; for, really, the patient feels that he has already paid enough—which he certainly has, if he has satisfied the purse-strings of one of these big surgeons.

Why Not Trust the Doctor You Know?

Now, really, Mr. Patient, wouldn't you rather that your family physician—to whom you confide things that you wouldn't tell even your left hand—should be well paid and share reasonably in the big fee you paid the surgeon, and keep the money at home? It will be more likely to get back to you—don't you think? In many a surgical case, the family physician carries more responsibility, has more worry, and gives you infinitely more time than does the surgeon. And, wouldn't it be wiser for you, Mr. Patient, to trust your physician to handle the entire transaction, agree to pay a certain sum, and let the man whom you know personally hire and pay the surgeon, as well as select him; just as you would let a contractor, in whom you believe, assemble the material and hire the best men in the labor market he can get to build you a house? It is common sense in the one case, and you wouldn't think of doing it any other way; yet, in the other, the big surgeons say it is immoral and a fraud. Yes, sir, you would.

After all, it is not the patient who is after the physician's scalp, it is the big surgeon. For, the writer, when he was an interne, knew a rich merchant to pay \$300 for a simple appendectomy that required only a few minutes of the surgeon's time; and the merchant said: "I don't care for the \$300 for this operation on my daughter, but I would rather give some of it to the other doctors concerned in the case."

And, if you can't trust the family physician (without whose presence you would be afraid to die) with enough of your money to cover the transaction, as well as your life, how can you trust the surgeon—often a stranger—who has virtually no personal interest in you? In that case, your family doctor is a consummate scoundrel, and you ought to turn the rascal out.

Look around you, my friend. With all this fraud and graft of which the general practitioner has been charged guilty, lo, these many years, will somebody tell us why we don't find them rich men? Most of them who have grown gray in the service possess less of the world's goods than do the successful

men in other callings. Yes, many of them pay interest or rent on the roof over their heads all their lives.

The editorial comments of the newspapers certainly are wrong. The most progressive physicians of the state attended the Wichita convention, and the general practitioners of the state as well as of the country at large are right behind the "adverse element" who pigeonholed the surgeons' resolution known as Doctor Stewart's resolution. And you would not find a physician in a day's travel, in this or any other state, certainly not in Iola, who believes that the surgeon should be protected, by legislative enactment, in charging such fees as the confessed instigators of this move wish to do, and pocket the whole thing; leaving the everyday physician to seek just remuneration from a patient already drained dry and often angry with his physician for having sent him to a surgeon whom he now terms a robber.

Where Lies the Public's Safety

The public's only safety is to trust to an honest physician. Bless you, the rank and file of physicians wouldn't rob you or murder you half as quick as would the ordinary man you meet. And you know it, or you would not trust your wife and children—these dearest treasures on earth—to his fallibility. Now, would you?

Another thing. Many of the fellows who advertise as exclusive surgeons not only want to pocket all that the patient is able to pay, but, if the patient lives near enough, they often succeed in supplanting the physician as family adviser. Call it commission, if you darn please. The world is slow to balk at commission elsewhere. You put nothing in your stomach or on your back that hasn't the commission earmark stamped upon it, from the spring fruit on your table to a piece of real estate as small as a family burial lot. The only noncommissionable thing known is the present day fashionable skirt—that is too narrow to get even the smallest commission into. But, as heretofore stated, this is not a commission-question.

The family physician selects the best surgeon he can get and hires him; he collects a sum sufficient to pay the surgeon and all assistants, to meet incidental expenses, and to remunerate himself. This is the last step and present status of this question, and it would seem that this would be satisfactory. If legislation is invoked in behalf of the surgeon, one thing is likely to happen that he hasn't thought of, apparently. It will

happen that, instead of taking all the patient has or as much of it as he can get, his fees will be legislated downward until they will look to him like thirty cents on a Saturday night. And this, in order that the patient may have left to him the wherewithal to pay other worthy and useful people, including the family physician, the grocer, and undertaker sometimes.

Since the foregoing was written, the May number of *The Kansas Medical Journal* has come to hand, and from it I quote in corroboration of what I have said, as follows:

"As *The Capital* suggests, this fight on fee-splitting is not a local affair, inaugurated

by a local physician. It is a widespread movement inaugurated many years ago, and, strange as it may seem, among its strongest supporters are the men who are accustomed to split fees. *The Capital* is mistaken in supposing that when fee-splitting is prohibited the fees will be smaller. The only difference will be that the surgeon and the specialist will get all the fee."

In that case, will you take kindly to another bill from the physician, for his services in connection with the surgical case? If not, then it is high time for the public, as well as for the physicians, to tell the surgeons where to head in.

The Mystery of the Double "C"

Chapter One of "Lens, Reagent & Co."

By B. G. R. WILLIAMS, M. D., Paris, Illinois

THEY tell me that the London police are still searching for the Black Wharf Gang; and that, of course, is what they are expected to do. It has leaked out, though, that the gang, in return, is adopting every means available to run down Old Mistletoe. And this is truly the keen hunt; indeed, it is a quest for vengeance. Ever hear of Old Mistletoe, the parasite? No? Well, just at present no one seems to know much concerning him and his everyday life; still, some of his capers have leaked out, and I am going to repeat them as they were confided to me.

Old Mistletoe was no stool-pigeon—not he. Of course, he may have assumed the part incidentally and upon his own responsibility; the police, however, would much prefer to have the old man under lock and key, rather than all the criminals in London. No, you will not find his photograph in the rogues' gallery nor will the average sergeant acknowledge that such a person exists; nevertheless, Scotland Yards is perplexed, for they have to deal with a genius. But he got in bad with the thugs at the onset, and this is how it happened:

Bonnie Jim had made a big haul from an easy burglar-proof safe—but never mind details. It is sufficient to mention that one midnight Bonnie was walking down Hay Street with five thousand dollars of the worldly wealth of Jake Schnadker, the jeweler. To sneak would have been fatal, so Bonnie walked with a decided swagger. Doubtless

the police would learn of the business only when Jake's shop would be opened for the day.

Then, suddenly, an old gentleman stumbled out of a taxi and crossed the walk in front of him with an approved champagne reel, presumably aiming for the door of his apartment. "An old sport!" Sport?—it wasn't two minutes when Bonnie found himself securely handcuffed and was riding with the old man toward the nearest police-station. In an inside pocket, just under the detective's gold-plated badge, rested Bonnie's (or, rather, Jake's) five thousand. Fifteen minutes later, the taxi stopped and Bonnie was pushed out at a conveniently dark spot and deserted. Whereupon he used some rather bad language, mainly upon the excuse that both the old grafter and the driver had laughed kind o' pleasantly; then he tried to make it to the river. Bad luck again—ere covering a block, he was nabbed by a patrolman. Of course he kept silent, while there was nothing to show that a shop could have been robbed by a man found handcuffed some ten miles away. The thing was kept out of the papers, and the five thousand was not returned to Jake.

The Black Wharf Gang bumped up against Old Mistletoe two weeks later, when their rescue car broke down a mile or so from the scene of activities and had to be deserted. Parlor Pearl had sneaked out of an apartment entrance with Mrs. Jean Shore's three-thousand-dollar necklace. Instructions were,

to walk one block carrying her parasol under her right arm, and she would be picked up by the rescue-machine and transferred as rapidly as possible from the section. Pearl walked the block. She walked another half block with no aid in sight, when she heard an alarm from behind. She did what was, perhaps, the most sensible thing to do under the circumstances—turned into a motion-picture show, took a seat near the wall, and tried to think out a plan of escape. Naturally, a thief would try to run, she reasoned, and the police would look elsewhere first.

A nice appearing old gentleman sat down beside Pearl and ventured the information that some kind of a burglary was causing a great amount of excitement just outside. Presently the lights were extinguished and a rather catchy picture took her interest for the moment. Indeed, she was regaining some of her composure and courage, when the old man whispered into her ear, "You might as well hand them over to me. You are surrounded. One squeal, and our witnesses will send you to the coop." It did not take her long to reason it out. Old Mistletoe arose and beat it, after warning her not to leave the building for at least five minutes. The gang believed her story, but it took several other bitter lessons to send them upon their campaign for vengeance.

Meanwhile the stupid police are searching only for the gang.

* * *

It has been claimed that, when pyococci are introduced into a cold abscess, they are actively destroyed. It may be that this is accomplished in part by virtue of the phagocytic action of the body-cells. But we know that the tubercle bacillus is a selfish germ, seeking neither the company nor the assistance of other bacteria, but preferring to work alone and hidden, taking his own good time for the destruction of his victim. And when the other germs attempt to keep him company he resents it.

But, after a certain amount of lung involvement has taken place, either because of attenuating influences or because he saves his strength to gain newer footholds, the tubercle bacillus appears to permit certain other microparasites to take a part. Of these, we must mention the pyococcus, streptococcus, pneumococcus, bacillus mucosus capsulatus, micrococcus tetragenus, micrococcus catarhalis, and certain molds.

This brings us to the mystery of the chronic cough, and the means used by Lens, Reagent & Co. to determine the criminals at fault.

According to the routine of the Company, Reagent first tried his hand; and Sputum, the main witness, was given a questioning. If Albumin could be located in his company, evidence, although circumstantial, would be rather conclusive that bacterial criminals, and especially the sneaking Tubercle Bacillus, were hidden and up to mischief. When it developed that Albumin could not be found, Reagent, with his wealth of experience, realized that his quest would, probably, prove unsuccessful.

It is, I believe, a generally accepted fact that, in chronic lung conditions, where kidney and heart edemas can be ruled out, albumin (serum-albumin) is a very important finding, pointing to the probability of tuberculous infection. Conversely, when albumin is absent, in all likelihood the tubercle bacillus and tuberculous infection will not be found.

Returning to our story, it may be remarked that Reagent played his best card first; still his work was not done. Searching inquiry brought from Sputum the fact that Hemoglobin was present, whereupon Reagent turned the case over to Lens, together with this bit of very weak circumstantial evidence against Bacillus Tuberculosis.

Lens likewise used his best trick at the outset. The chief witness now was examined repeatedly for the crooked red rod. Moreover, when ordinary processes availed nothing, severe sweating by his assistants, Antiformin and Salt, were undertaken. However, no confession could be forced from Sputum.

Then came the question of clews. Bacillus Tuberculosis being somewhat careless at times, leaves behind him elastic fibers, mononuclear cells and cheesy debris; none of which could be found, though.

Nevertheless, Lens was a wise chap. Knowing of the working of Old Pyococcus, the parasite, he left off for the moment his search for the chief of the red gang, arguing that he may have deserted and left the old gentleman to finish the work. But neither Old Pyococcus nor clews (polynuclear cells) could be found.

Right at this point I wish to sound a caution. Every pyococcus in a sputum does not mean pyococcus infection. The mouth-cavity should be washed thoroughly, so that oral bacteria may not be carried out by the sputum and, hence, cause confusion. Moreover, pyococci must be found in considerable number *intimately mixed with the mucus or pus hawked up from the lung* in order to be considered valuable finds. And, most important of all, quite a large number of polymorpho-

nuclear cells (true pus-cells), and endothelial leukocytes, always are present along with the pyococcus, when this is the active infective agent.

Continuing, parenthetically, it may be that the reader will demand a definition of "pyococcus"—a word recently coming into use. The term staphylococcus is somewhat objectionable, because the bacterial units do not always form grapelike clusters. Single cocci or diplococci in pus, when planted upon artificial media, may show the morphological and cultural characteristics of staphylococci; but, in the examination of smears, this point might be overlooked. In most specimens of pus, however, the mass arrangements will be noted. There are many staphylococci, but there are few pyococci. Other cocci form pus, but the pyococcus works overtime at the job.

So, these were the methods used by Lens, Reagent & Co.; and they certainly cannot be criticized. For, considering the efficiency of the Vaccine Service, a successful hunting-down and prosecution of any criminals that

might have been present would have proved of great value to the cell community.

About this time, however, Hand, Ear & Co., a rival detective firm, were engaged. By working along other lines, they at length made some exceedingly interesting observations. Finally the trouble was successfully located and accurately mapped.

It is sufficient to state that the diagnosis was that of aneurism of the thoracic aorta, and that Lens, Reagent & Co. failed in this case. The condition was a catastrophe, but not a crime. However, everyone gained. It was realized by the chief of police that both firms were of great service. Inasmuch as their methods differed, the problem upon which one failed, possibly might be solved by the other. Accordingly, a working-agreement was planned for the future. However, Lens, Reagent & Co. resolved that in the next case their rivals must come out second-best. We shall see how this was realized.

(To be continued)

BALLAD OF THE BELL

By E. O. LAUGHLIN, M. D., Paris, Illinois

No more, the family mare astride,
The humping Hired Hand has to ride
In good old Tam o'Shanter style
To fetch the doctor, mile on mile.
Adventure and romance are flown—
They call him on the telephone.

What boots it, doctor, where you go—
To club, to lodge, or, eke, the show?
Or to your room in deep research,
Or (maybe!) to your pew at church?
Some lackey calls in strident tone:
"You're wanted on the telephone!"

When others' hours of toil have fled,
When pleasures are like poppies spread,
Ghost of each feast and festival,
Ubiquitous, perpetual,
You greet those tidings with a groan—
"You're wanted on the telephone!"

The fairest day is 'neath its blight,
Its specter haunts the wildest night.
Of every joy it sounds the knell,
The dangling, wrangling, jangling bell—
Across your dearest dreams they moan,
"You're wanted on the telephone."

O doctor, when your fleshly ills
Are ended and you quit the pills
For Paradise, Oh still, I fear,
Some sprite will whisper, drawing near
Your seat beneath the great white Throne,
"You're wanted on the telephone!"

What Others are Doing

ARSENOBENZOL COMBINATION WITH SILVER SALTS

Although starting from Ehrlich's original work in arsenical chemotherapy, Danysz (*Ann. d. l'Inst. Pasteur*, Mar., 1914) tells how he proceeded independently on these lines, and finally arrived at a combination of the bromide of silver with dioxidyaminoarsenobenzol for the treatment of trypanosomiasis and syphilis; his thought being to fortify the arsenical compound by the silver, each element acting in its way without individually overwhelming the infected host. Thus far he had treated 80 syphilitics, and the results were exceedingly promising.

ACONITINE IN CEREBRAL HEMORRHAGE

The Medical Record quotes editorially from the work of Tilnay on the "Modern Treatment of Nervous and Mental Diseases," as to the value of aconitine as an active agent for the reduction of blood pressure. It may be given hypodermically to patients suffering from cerebral hemorrhage, although, if the patient is able to swallow, he believes it preferable to administer the drug by the mouth, using tincture of aconite in doses of 5 minims. If the initial dose produces no effect upon the blood pressure, the dose should be repeated at the end of an hour; and if the pressure is 200 mm. or over, an initial dose of 10 minims may be given. The pressure readings should be taken every half hour. The remedy may be continued for several hours, until the desired depressant effect is secured. Dilatation of the pupil, vomiting, irregularity of the pulse, cold, moist skin, an erythematous rash and dyspnea, are signs of intoxication, pointing to the discontinuance of the drug.

What constitutes a sufficient fall of the blood pressure? The answer is that 20 to 30 mm. reduction may be deemed sufficient; when the initial pressure is well above 200 mm., the aim should be to bring it down below this point.

In this connection we may call attention to the superiority of the soluble alkaloidal salt, aconitine hydrobromide, over the galenic preparations of aconite. The granules can be dissolved in water and the solution given through a medicine dropper if necessary.

Already it has been suggested that hypodermic injections of emetine hydrochloride may prove most effective in cerebral hemorrhage. It should be tried. Will anyone having experience with the remedy in this condition report his results?

HOPE FOR THE EPILEPTIC

Two very interesting articles upon the treatment of epilepsy have occurred recently in two of the American medical weeklies. The first which I have in mind is that of Israel Bram, who, in *The New York Medical Journal*, March 20, 1915 (p. 573), strongly advocates venesection in the treatment of this disease, upon the hypothesis that a fit is probably consequent upon a sudden increase of blood pressure, associated with a tremendously high increase of intracranial tension. This condition can best be overcome by venesection, which not only relieves the patient temporarily, but, according to Bram, seems to favor a complete cure through overcoming of the epilepsy habit.

The amount of blood to be removed varies with the size or condition of the individual. A plethoric adult weighing approximately 145 pounds, can spare from 20 to 30 ounces of blood at a sitting. While no definite rule can be given as to the frequency with which patients should be bled, it is Bram's experience that it is necessary to repeat the operation every two to six months. The indications presented for this procedure are return of dizziness, fulness in the head and flushing of the skin. These symptoms are usually premonitory of an impending fit.

The contraindications to venesection in epilepsy are few, anemia being the only one mentioned by the author. Bram also suggests the use of an occasional laxative saline to assist elimination and reduce blood pres-

sure, together with sodium nitrite, potassium iodide, and thyroid in properly selected cases.

The other paper to which reference was made at the beginning of this article was that contributed by Charles A. L. Reed, of Cincinnati, to *The Journal of the American Medical Association* (p. 1047, March 27, 1915). Doctor Reed has undertaken some work which may prove revolutionary. His observation of cases of epilepsy has convinced him that this disease is etiologically closely associated with intestinal autointoxication. These patients are all constipated, and in every stage of the disease there are symptoms characteristic of the absorption of toxins of intestinal origin. Constipation of mechanical origin is the striking fact revealed by his experience with epilepsy.

As a result of his investigations, Doctor Reed has arrived at the conclusion that epilepsy is an infectious disease and that this secondary autointoxication is a result of the presence of bacteria (probably of the gas-poisoning series) in the intestinal canal. If the function of the bowel can be restored so perfectly that the elaboration and absorption of these bacterial by-products can be arrested, the number of fits will be reduced and cure may follow; this conclusion being based upon a large and growing clinical experience.

To permanently relieve these cases of epilepsy, therefore, Doctor Reed believes it essential to resort to the surgical procedures advocated by Lane and others for the correction of intestinal stasis. He has also used, with good success, autogenous bacterins prepared from bacteria found in the blood and alvine discharges, believing these to be the etiologic factor in the production of the disease. He promises a more complete bacteriologic report in a later paper.

A number of cases are discussed, in which remarkable benefit followed surgical intervention.

A HINT FOR THE HYPODERMIC INJECTION OF EMETINE

In an excellent article, published in *Items of Interest*, February, 1915, on "Amebæ in Pyorrheal Pockets," C. Edmund Kells, a New Orleans dentist, gives the technic which he employs in detecting the entameba buccalis and in injecting emetine hydrochloride for the treatment of pyorrhea. He prefers the hypodermic method, as advocated by Doctors Bass and Johns, of Tulane University.

The method of treatment which he advises has been so often described in these columns

that there is no need of repetition. However, he makes one suggestion which is worthy of careful note, in view of the pain and irritation which occasionally follows the subcutaneous administration of this drug. This suggestion is, that the emetine should be injected *warm*. Unless the solution is freshly made, the syringe should be heated by rinsing it out well with boiling distilled water before filling it with the emetine solution. The heat of the syringe thus induced, will warm the emetine to the proper temperature before injection.

This is a little point, but worth keeping in mind. It is highly probable that if the solution is injected at the temperature of the body, it will prove less irritant than when it is injected cold.

By the way, an equally good suggestion is to use only *warm* solutions of emetine in making applications to the pus cavities in the mouth. Cold solutions of all kinds are anything but pleasant to sensitive teeth.

PAPAVERINE — A LITTLE-STUDIED ALKALOID OF OPIUM

If my memory serves me right, opium contains about twenty-five alkaloids and active principles. Count over on your fingers how many of them you know anything about. With morphine and codeine I suspect that your experience begins and ends. Nevertheless, there are other alkaloids in this substance which *may* be just as valuable as the two just mentioned. For instance, last month we gave an abstract from the *Wiener Medizinische Wochenschrift*, telling of the successful use of papaverine, one of the opium alkaloids, in the treatment of whooping-cough.

I find more about papaverine in the December 14, 1914, number of the *Berliner Klinische Wochenschrift*, in which Julius Pohl gives some interesting facts concerning the opium principles. He declares that papaverine exerts the same gastrointestinal action as morphine, producing constipation and relaxing spasm of the uterus and other smooth muscle-fiber, acting in this respect much like atropine. It also reduces blood pressure to a marked and lasting degree. Furthermore, it seems to control many cases of vomiting, particularly when these are due to pyloric spasm. Experimentally it has been found to reduce the excretion of sugar after phloridzin or epinephrine. A central depressant action does not follow in the doses ordinarily administered to produce the therapeutic effects just described, though sometimes in

dogs such depressant action can be elicited if sufficiently large doses are administered.

Here is an alkaloid which deserves more study. Why do not some of the bright men in the profession try it out, both on animals and in suitable cases? If my memory serves me right, the average therapeutic dose is in the neighborhood of 1-6 grain. Merck gives the dose of the hydrochloride at from 1-12 to 3-4 grain.

THE HYPERSECRETION THE OBJECT OF ATTACK IN GASTRIC ULCER

In view of the frequent occurrence of hypersecretion and hyperacidity in gastric and duodenal ulcer, medical writers have recommended special treatment for these abnormalities. Now again W. Wolff, of the Jewish Hospital at Berlin (*Med. Klin.*, 1914, p. 1358; cf. *Ther. Monatsh.*, 1914, No. 12) emphasizes this line of therapy. In addition to other accepted methods of reducing acidity of the stomach, Wolff lays stress upon associating the ulcer-diet with plenty of fatty emulsion (of perfect preparation) and putting the patient upon atropine.

TREATMENT OF INCIPIENT SENILE CATARACT

R. Kaz, of St. Petersburg, confirms his own previous results, as well as those of other writers (*Woch. f. d. Ther. d. Aug.*; cf. *Ther. Monatsh.*, Aug., 1914), on the usefulness of instillations of potassium iodide for arresting incipient cataract in the aged. He uses solutions of from 1-2- to 10-percent strength; but this point must be discovered for each individual case. The treatment must be continued uninterruptedly for a long period.

TREATMENT OF TROPICAL DISEASES

That the treatment of tropical diseases demands of the medical man nothing more than the rational application of principles involved in the management of those encountered in northern countries, is emphasized by P. Muehlens, of Hamburg, in a lengthy contribution to the *Deutsche Medizinische Wochenschrift* (1914, p. 1250). The following brief abstract shows the author's ideas regarding the central therapy in a few of the diseases prevalent in tropical climates.

In the case of amebic dysentery, emetine now offers us a remedy that overcomes the intestinal symptoms and almost certainly eradicates the parasite. As a rule, for

adults, the hypodermic injection of 1-10 Gram (1 1-2 grains) once a day, for four consecutive days, effects a cure. Not infrequently the bacillary form of dysentery also is beneficially influenced.

In Asiatic cholera, nothing approaches in effectiveness the parenteral administration of sodium-chloride solution, ordinarily introduced under the skin, or, in critical cases, by infusion into the veins. Severe symptoms can be obviated, mostly, by means of one of the cholera-serums (those of Kraus, Salimbeni, Schurupoff, Tomarkin, and Carrière being instanced). The prophylactic vaccination according to Haffkine and Kolle is referred to as probably useful.

In beriberi, often acute cardiac attacks set in, and then venesection is indicated. For the paralysis of the diaphragm, faradization of the phrenic nerve is advised, with the electrodes disposed over the gastric region, and the posterior attachment of the sternocleidomastoideus muscle.

For typhus fever, some good results have been obtained, in the Balkan wars, with injections of convalescent serum. In mild forms of bubonic plague, vaccines and sera offer some hope; against severe attacks medical art remains helpless. Suppressed diuresis and cardiac insufficiency constitute serious complications of all tropical diseases.

INTESTINAL TOXEMIA AND DIABETES

Is there a recognizable prediabetic stage? We gather from an article contributed by Dr. A. C. Croftan to *The Medical Record*, December 26, 1914 (p. 1085) that there is such a stage, at the beginning purely functional in character and characterized by dyspeptic symptoms, vague aches and pains, scanty, concentrated urine, disturbances of the capillary circulation, palpitation, headache, malaise, and the like. The picture, says Doctor Croftan, is that of a chronic alimentary intoxication, presumably the result of incorrect or disturbed food degradation, especially of the albumens, aided by the decomposing action of putrefactive bacteria upon abnormal albumen fragments in the bowel.

The later development of alimentary glycosuria in these cases is presumably the result of injury to the liver and pancreas by the poisons developed in the intestinal canal.

To place these patients at once upon an antidiabetic diet is bad practice, declares Doctor Croftan. If the urine contains no dextrose, or small quantities of this sub-

stance, but does contain large quantities of the aromatic bodies, then the diet should be arranged primarily for the reduction of the latter substances, and should consist largely of vegetables, fruits, coarse cereals, bran breads, nuts, milk diluted with lime water, buttermilk, fats and oils, with a minimum of meat, fish, poultry and eggs, and preparations made therefrom. All alcoholic beverages and malted liquors, and all spices and condiments, are forbidden. Such a diet produces a bulky stool, while nutrition is well maintained. After a time it may be made more generous.

Medicinally, Doctor Croftan advises administering pancreatic and bile preparations—for instance, glycerin extracts of the pancreas, and the bile-acid salts. Alkalis are also indicated, and intestinal antiseptics may be administered, though Doctor Croftan seems doubtful of their value.

If we may add a word of suggestion of our own, it would be that the conditions which Doctor Croftan outlines are exactly those which call for the administration of preparations of the Bulgarian bacillus. As a matter of fact, the reports of Beveridge, Boston, and Horowitz show that many of these cases of diabetes, even when advanced, do remarkably well on cultures of the Bulgarian organism, the reduction and even the disappearance of sugar from the urine, and improvement of all symptoms being a very frequent result of such treatment. Bile salts are certainly indicated, and pancreatic preparations can do no harm and may prove of much value.

QUARANTINING OF MEASLES

The New York Board of Health has discontinued fumigation after contagious diseases, and the same practice is being adopted in other large cities. In Chicago, for instance, the method of quarantining has been entirely revolutionized and the length of confinement greatly shortened. This is particularly true as regards measles. Anderson and Goldberger, of the United States Hygienic Laboratory, have shown that this disease is produced by a droplet infection from the secretions of the nasal and buccal cavities. Only those persons will be infected, therefore, who come in contact with these discharges, which, however, may be carried by fomites, i. e., on clothing and other material coming in contact with the patient.

"The virus of measles," says *The New York Medical Journal*, "is contained in the blood at least 24 hours before the eruption, but

begins to fade about 24 hours thereafter. During this period monkeys have been successfully inoculated. The contagious stage of measles is the preeruptive or catarrhal stage. It is during this period that the disease is transmitted; and the diagnosis must be made and proper isolation is necessary to prevent the spread."

For many years the bran-like epithelium thrown off by patients suffering from measles has been considered the principal means for transmission. This theory has now been discredited. It is not the epithelium which causes the trouble; it is the discharge from the nose and throat. In two or three weeks and after the disinfection of clothing and the like, the quarantine may be raised without fumigation and without fear.

CHECKING TYPHOID FEVER IN THE ARMIES

Last month we referred to the results being obtained from prophylactic vaccination against typhoid fever in the British army. Here is another report on the same subject, taken from the British War Office report put on file March 4. The following cases of typhoid fever occurred in the British army on the continent:

	Cases	Deaths
Uninoculated soldiers.....	359	48
Fully inoculated soldiers (2 doses within 2 years).....	111	1
Partly protected (1 dose).....	136	1
Total.....	606	50

From this it appears that 57 percent of the cases and 96 percent of the deaths have occurred in those who have not received this protection, although the unprotected ones doubtless form a small minority of the total number exposed. This experience is exactly in line with that of our own army.

EMETINE IN DYSENTERY

So much has been said about the use of emetine in the treatment of pyorrhea during the last two or three months that we may be inclined to forget that this drug made its first great reputation as a cure for amebic dysentery. The latter disease is by no means uncommon in the United States; indeed, there are thousands of cases of this kind of dysentery in our southern states, and in case of doubt, especially in cases which resist the ordinary methods of treatment, emetine should be given a trial. Chronic dysenteries

are always suspicious, whether seen north or south.

Randolph Lyons has a very interesting paper upon the use of emetine hydrochloride in amebic affections in the February number of *The Southern Medical Journal* (p. 119). In this paper he brings out the important point, that emetine, whether taken by the mouth or given subcutaneously, exerts its specific action only upon those entamebæ which are within reach of the circulation, that is, in the tissues. Amebæ which are free in the lumen of the bowel, are not influenced by the drug, which is not eliminated in the feces.

Lyons says that considerable advance has been made in the mode of administering emetine. The best method of giving it is by subcutaneous injection. The oral route is not to be recommended because of the intestinal irritation which it produces. However, it may be administered in keratin-coated pills, since it is not strongly emetic, but the dose should be small, that is, from 1-6 to 1-3 grain.

It is inadvisable to give large doses of emetine by the needle. One grain a day meets every indication in the majority of cases of amebic dysentery, although in acute cases, with hepatitis, sometimes as much as 2 grains daily may be necessary. To obtain its effect quickly, the individual dose should be small, preferably 1-3 grain, since this dosage is free from local irritation and is quickly absorbed into the blood stream. Two or three such doses may be given daily. Any single dose above 1-2 grain is more than likely to cause local irritation and thus retard absorption.

In treating these cases of amebic dysentery, Lyons declares that it is inadvisable to continue the injections for more than four or five days if the stools are apparently normal, provided the total duration of the course of treatment does not exceed two weeks. He calls attention to the fact that the prolonged subcutaneous use of even moderate doses of emetine may produce or keep up a diarrhea; hence the desirability of avoiding too long a course of medication of this character. He has noted one case of peripheral neuritis following prolonged administration of the drug.

In the few cases which resist treatment or tend to recur, the probabilities are that the entamebæ have become encysted, in which form they resist treatment. In these cases an intermittent series of injections should be adopted in order to reach the organisms when they are becoming active. A secondary

course may be given after intervals of two or three weeks, and this need not last more than four or five consecutive days. The dose of emetine should be 2-3 to 1 grain daily, preceded by a preliminary magnesium-sulphate purge.

WILL EMETINE ABORT TYPHOID FEVER?

One of the most astounding clinical suggestions relative to emetine which has come to our attention is that made by Dr. W. L. Frazier in the March 20, 1915, number of *The Medical Record* (see p. 476). In this paper Doctor Frazier declares that he has treated 82 cases with hypodermic injections of emetine hydrochloride, and as a result the majority of his cases were aborted, or cut short in from two to four days. In only 6 cases out of the 82 treated by this method did the fever run longer than four days after the treatment was begun. Of these 6, not one lasted more than six days.

Doctor Frazier has made some interesting animal tests. For instance, he has shown that the blood serum of a goat, withdrawn from the animal after three injections of 1-2 grain each of emetine, will not serve as a medium upon which to grow typhoid bacilli, and a colony planted on this dies within 10 hours. The same bactericidal action is manifest when efforts are made to grow this organism on bouillon and agar.

Doctor Frazier uses the emetine not only to abort typhoid fever, but as a prophylactic therefor. It should be employed as early as possible in every case, and it should also be given to patients known to be exposed. He considers it entirely safe and nontoxic. One-half grain is the adult dose employed, children bearing relatively large dosage. He usually gives the injections at 12-hour intervals, but they may be given at 6- or 8-hour intervals if required. This dosage is continued until the temperature falls to within one or one and one-half degrees of normal. As accessory treatment he keeps the bowel cleaned out with a little calomel or calomel and phenolphthalein.

Doctor Frazier speaks highly of the use of emetine hydrochloride as a hemostatic in typhoid fever. He says: "I have never seen a fatal hemorrhage following its late use; it acts favorably, but slowly, even in the third week."

Two cases are reported in detail. The first patient complained of feeling unwell on December 3, and on December 9 the abortive

treatment was begun, the temperature at that time ranging from 102° to 103.8° F. By December 12, the range was from 98.4° to 99.1° F. Widal was positive.

The second patient, a young man of 25, became sick about August 1, and was first seen by the Doctor on August 12. The emetine treatment was begun on August 15, the temperature at that time, as shown by the chart, being 104° F. It had fallen to normal by August 19.

This report is certainly a most remarkable one, but it is not safe to assume therefrom that emetine hydrochloride is necessarily an infallible panacea for typhoid fever. However, it has much promise, and this report should encourage many physicians to give the drug a trial in the treatment of this disease, of course in association with proper eliminative measures and thorough intestinal antiseptics with the sulphocarbolates.

EFFECT OF STROPHANTHIN UPON CARDIAC RHYTHM

The effect of intravenous injections of strophanthin upon the rhythm of the heart has been studied by H. G. Schleiter (*Amer. Jour. Med. Sci.*, 1914, p. 343) in 20 individuals, 10 of whom exhibited an irregular pulse. In the latter group, the treatment proved remedial. The influence of the drug became noticeable, mostly, within twenty or thirty minutes, attained its maximum in seven or eight hours, and was maintained for from three to ten days. The active dose was found to range between 1-2 and 1 milligram (0.0005 to 0.001), and it should not be repeated before the expiration of forty-eight hours. In 2 of the cases, paroxysmal tachycardia ceased to reappear; the author is uncertain, however, whether this is ascribable to the injections.

The other 10 subjects had a regular pulse, and in them no particular effect could be observed, beyond exceptionally a slight, transitory one.

A PRACTITIONER'S OPINION ON HYOSCINE-MORPHINE ANESTHESIA

In an article which we find in *The Illinois Staats-Zeitung*, a physician by the name of Albert A. Ripperger discusses at some length the so-called twilight sleep as employed for rendering childbirth painless, introducing his remarks with the declaration that nothing else has produced such a commotion in the press since the announcement of Friedmann's

tuberculosis cure. Then he goes on to condemn in unmeasured terms the conscienceless exploitation in this country, by inexpert lay journalists, of the scopolamine-morphine anesthesia, and strongly warns the women of the dangers confronting them and their children from these drugs.

He particularly inveighs against the formation of women's clubs for the promulgation of the idea, stating that they are not the arbiters as to the adoption of this measure—as criminally advised by magazine hack-writers and other agitators—but that it is the physician who must decide in every instance; for, he alone can judge. And likewise he enjoins every accoucheur to remain steadfast and under no circumstance to allow himself to be swerved from the path of professional duty by the pleadings of women he is to deliver; they must ever bear in mind that the German experts, including even Gauss himself, do not disguise the lurking dangers, naming as contraindications, for instance, disturbances of circulation and respiration, general weakness, febrile states, acute anemia, and contracted pelvis. Incidentally the author refers to the fact that the scopolamine-morphine narcosis first was publicly suggested by the German physician Schneiderlin, who employed it in surgical operations.

After uttering these fair warnings, Doctor Ripperger frankly writes: "Nevertheless we can, with clean conscience, aver that in the scopolamine-morphine narcosis we possess an excellent, yes, wonderful means of ameliorating the often almost unendurable birthpangs; provided the remedy is not administered haphazard and after some fixed, routine rule, but only after a strict individualization. Neither should the narcosis be greatly prolonged (never for days!); rather should the injection be reserved for the appropriate, critical moment, at the culmination of the parturition, or for overcoming spastic labor-pains. Thus used, minimal, harmless doses will suffice.

"Moreover," he continues, "it is highly desirable to drop entirely before the public the term 'daemmerschlaf,' twilight sleep, or any such particularizing designation (especially romantic ones captivating the public fancy), since they tend to engender erroneous conceptions—even, indeed, in the mind of the medical man. Scopolamine, or its morphine combination, should not be represented as peculiarly detached from the rest of the *materia medica*, but merely be looked upon as an excellent remedy to be employed whenever and howsoever as the competent clinician considers indicated; but never to

be given indiscriminately to every woman giving birth. Thus prescribed, no specialist need be called, but any competent practitioner can employ this medicament exactly as he does, in his private practice, in the case of other powerful poisons—strychnine, atropine, aconitine, and the rest."

Then the author mentions a recent experience in his private practice in which the "really wonderful action" of small doses of scopolamine - morphine was demonstrated, "the most striking action of a remedial agent ever seen."

He was called to a woman having her first child, who for twenty long hours had suffered torments, without there being any progress. He injected a small dose of hyoscine-morphine, and very soon the spastic pain had completely disappeared. In the course of three hours, two further small doses were injected, when the child was born under absence of all pain and without harm either to mother or child. At no time was narcosis such that impairment of recognition occurred, the woman having retained, throughout, complete consciousness; yet, she experienced absolutely no pain. Ripperger concludes:

"Truly, a triumph of modern healing art! Twilight sleep, correctly employed in properly selected cases, is a blessing; twilight sleep, employed routine-fashion and in defiance of conscience, is a calamity."

HYDRASTOPONE: A NEW ANTIDYSMENORRHEIC

H. Walther, of Giessen, has made a few trials with the preparation named in the head line (*Med. Klin.*), and his results have been so satisfactory that he advises further tests of its action. Hydrastopone is a mixture of papaverine and hydrastinine, thus combining the vasoconstrictive action of the one and the antispastic action of the other. The author has found it valuable in dysmenorrheas of various character.

KARLSBAD SALT AS A VULNERARY

In a communication to the *Deutsche Militär-aerztliche Zeitschrift* (1914, No. 8), Doctor Posner praises the virtues of Karlsbad salt in the treatment of wounds of various descriptions, as established in military hospitals. In particular, there are mentioned operative wounds that heal by granulation, infected shotwounds, lanced furuncles, leg-ulcers, burns, and so on. The salt is applied as soon

as pus discharge begins to diminish, whereupon the wound surface becomes dry, and the epithelial edge rapidly advances, while healing is favored by not disturbing the dressing for from three to five days.

The foregoing is abstracted from the *Militärarzt*, so, we cannot decide whether the author employs a solution of given concentration or the salt in substance. It might not be amiss to experiment (carefully) with effervescent solution of the sulphate of magnesium. The effervescence conceivably may help to bring to the surface the wound-dirt from the bottom and recesses of the lesion [this writer finds food particles expelled from between the teeth by rinsing with two drams of hydrogen dioxide solution], while the sugar present only could be of benefit in suppurating lesions.

THE INFECTIOUS STATE OF PERTUSSIS

Whooping-cough, E. Feer, of the Clinic for Children at Zurich, maintains (*Med. Klin.*, 1914, p. 837), no longer is infective in the pronounced convulsive stage, so that, consequently, no need exists for excluding children at that period from schools or, in general, from contact with other children. On the other hand, the other young folks of the household exposed to the infection, if exhibiting any sign of catarrh or cough, are suspicious, and must rigorously be kept from the vicinity of individuals liable to become infected.

MINERAL OIL IN INTESTINAL STASIS

While Arbuthnot Lane, through his interesting work on intestinal stasis, has, more than anyone else, stimulated interest in mineral oil when treating intestinal stasis, its present-day use really dates from the publication of a paper by Schmidt in the *Münchener Medizinische Wochenschrift* for 1905; at least, so we are informed by J. E. Cook, in his excellent resumé of this subject published in the March, 1915, number of *The Interstate Medical Journal*.

The special advantage of the mineral oil, according to Lane, is that in these cases of stasis, with sagging of the colon and kinking of the bowel at various points, the oil softens the fecal matter and allows this material to pass more readily through the angulations of the bowel. Unless cases are too far advanced and the anatomic changes severe enough to require surgical intervention, relief is usually obtainable from mineral oil. Mechanical

obstruction is particularly likely to prevail in the more severe and intractable forms of constipation which refuse to yield to ordinary therapeutic measures.

Cook says that certain properties in the oil may be regarded as essential. Thus, it should be colorless, odorless, and as nearly free from petroleum taste as possible; also, it should be nonfluorescent, free from acids, alkalis and other organic impurities. While Russian petroleum can more easily be made to conform to these requirements, it is now known that an American product which contains hydrocarbons of a different series, may also fulfil all the desired conditions; and, as a matter of fact, American oil of very finest quality is now available on the market.

DIAGNOSTIC SIGN OF PERICARDITIS

One sign of pericarditis, according to J. Thomayer (*Casop. Lekar. Cesk.*; cf. *Wien. Med. Woch.*, 1915, p. 46), is elicited as follows: When the patient lies flat on his back and the respiration-sound is diminished under the left clavicle, but grows stronger again upon his resuming the vertical position, then the suspicion of pericarditic exudation is proven correct. In the prone position, the pericardial fluid presses upon the left bronchial tube, and this weakens the respirational sound.

MERCURY-SALVARSAN TREATMENT OF SYPHILIS

Prof. Erich Hoffmann, of Bonn, has published a brochure (Bonn: Fr. Cohen., Price, M. 1.60), in which he gives, solely, his personal experiences with the diagnosis and treatment of syphilis. The outstanding feature of this treatise is, the warm advocacy of the combined mercury and salvarsan therapy, the results of which the author finds greatly superior to those derived from mercury alone. The monograph undoubtedly will prove instructive to anyone versed in the language and engaged in treating luetic patients.

Professor Hoffmann gives preference to the original salvarsan, administering intravenously, the proportions of the fluid being 0.1 Gram salvarsan in 50 Cc. of a 4-10-percent sodium-chloride solution. The single dose is 0.3 to 0.4 Gram of salvarsan; this being repeated from 4 to 6 times at intervals of from five to seven days.

At the same time from 36 to 42 inunctions of mercury are made, of 4 or 5 Grams oint-

ment each. Instead of these, one may give from 12 to 15 injections of mercury salicylate, of 0.1 Gram each, or, 10 to 14 injections of calomel, of 0.05 Gram each.

By means of this course, Hoffmann secures complete freedom from symptoms and negative serologic reaction in not less than 94 percent of primary syphilis. Treatment must be instituted immediately following definite diagnosis; also, the course should be repeated from time to time, under careful control.

SHALL WE OPERATE ON THE DIABETIC?

Some years ago we remember getting into a controversy with a good Texas brother, who insisted that we were giving bad advice when urging amputation of diabetic extremities. He quoted to us the old axiom, that patients suffering from diabetes were poor risks and should *never* be operated upon—better chances following leaving the outcome in nature's hands.

However, we stood our ground, and we have never had reason to change our opinion as to the advisability of resorting to surgical intervention in diabetic cases, when the condition of the patient seemed to warrant it. Now we find further support in a paper, entitled "Diabetes and Surgery," contributed by Dr. Edward H. Risley to *The Boston Medical and Surgical Journal* for January 21, 1915 (p. 90). Doctor Risley makes a careful analysis of the reports of surgical operations upon diabetics, and arrives at the conclusion that a mortality of 20 to 30 percent may be expected in this class of cases. From the data obtained, he declares that most of the major operations have been and can be performed with success upon diabetic patients. When such cases as strangulated hernia, extensive malignant disease and sepsis, which in themselves give a high mortality, are omitted, we may expect a reasonably low death-rate.

The percentage of sugar in the urine is no criterion of the outcome, since fatal results have followed when sugar was temporarily absent, and patients presenting a large amount of sugar have often recovered. However, thorough examination of the urine should be made in every case, especially for the detection of acetone and diacetic acid. Also, the total amount of ammonia should always be estimated, and no operation, except of the most extreme urgency, should be performed if there is one gram of ammonia excreted in 24 hours until this has been

reduced to the normal amount (.759 Gm.). Also, an operation should be postponed should there be acetone and diacetic acid, even if the amount of ammonia is normal; and, finally, much albumin in the urine is a contraindication to operation, and even in small amounts is of bad prognostic import.

ANTISEPTIC VAGINAL IRRIGATIONS IN PREGNANT AND PARTURIENT WOMEN

F. Zweifel, of the Surgical Clinic at Wuerzburg, lays down in the *Medizinische Klinik* (1914, p. 1428) a line of procedure regarding the use of antiseptic vaginal irrigations of pregnant and parturient women.

If the vaginal secretion of such women is normal, any kind of irrigation is entirely superfluous. If pathologic, and childbirth is more than ten days ahead, irrigations with 1-2-percent solution of lactic acid are advisable. Or, if the period of delivery is close at hand or has supervened, then the mechanical cleansing of the vagina should be effected by means of douches with 1 or 2 liters of saline solution, followed by an injection of 100 or 200 Cc. of a 1 : 2000 mercuric-chloride solution.

A NOVEL METHOD OF ADMINISTERING DRUGS

The British medical journals are filled with suggestions for medical and surgical military practice. Here is a clever one, submitted by F. W. Tunnicliffe, who is lecturer on therapeutics and practical medicine at King's College Hospital Medical School. It is published in *The Lancet*, February 6, 1915 (p. 274).

Doctor Tunnicliffe points out that the conditions obtaining in the trenches make hypodermic or rectal injection exceedingly difficult, the absence of water makes the solution of solid preparations impossible, while the manipulation of tablets and the swallowing of these dose-forms, in the absence of water, make this form of medication an undesirable one. Therefore, Tunnicliffe suggests that the drug be mixed in a semisolid aromatic base, and dispensed from collapsible tubes. A given length of jet from the tube should contain a definite quantity of the drug. For instance, an inch could easily be measured against the last joint of the thumb, and for practical purposes could be guessed at accurately enough.

The composition of the base could be varied to suit climatic and other conditions by the addition of glycerin, bismuth, agar-agar, and the like. As one constituent of the base, Doctor Tunnicliffe advises the use of some aromatic substance promoting salivation, thus reflexly stimulating swallowing.

So far as he can learn, any drug, crystalloid or otherwise, or any first dressing of wounds, except hydrogen peroxide, can be administered in this form and in adequate concentration. For instance, he has prepared a chlorodyne cream containing up to 30 minims to the inch, and a morphine cream containing up to 2 grains to the inch. The idea is certainly a clever one. Has it applications in civil practice? Who can suggest?

IODINE IN FIRST-AID PACKAGES

As we have already stated in these pages, the war in Europe has often been nicknamed "the iodine war," on account of the general use of this antiseptic in military surgical practice in France and Flanders. We copy from a letter to *The Medical Record* of January 23, 1915, written by Dr. Allan McLane Hamilton, the following item bearing upon this point:

"The use of iodine seems to be most general just at this time, and the French government furnishes each soldier with a small packet containing an ampule with a small brush. An English pharmacist has improved this by supplying an ampule filled with a strong tincture, the friable stem of which ends in a pledget of gauze or cotton. When the wounded man breaks the terminal stem, the bandage is soaked with the contents, and with this he thoroughly swabs the wound. It is said to be far more efficacious than the simple application of gauze, which is certain to favor the retention of any imprisoned bacteria. This is on the theory that in anaerobic wounds the dangerous bacteria of tetanus, gangrene, malignant edema, and other diseases thrive in situations when air is excluded; in fact, after the first application of iodine there is little or no dressing applied. In many cases the wound heals by first intention."

POSTANESTHETIC NAUSEA—A SIMPLE REMEDY FOR ITS RELIEF

Dr. Joseph E. Lumbard is convinced that the prime factor in the production of nausea and vomiting after taking an anesthetic, is the smell. Accordingly he suggests (*Medical*

Record, Dec. 19, 1914, p. 1051) the desirability of substituting some pleasant odor for the offensive smell of the ether during the stage of recovery from the volatile anesthetic. To accomplish this, he has devised a simple expedient, which he has tested in many cases, with perfect success. This consists in rolling up eight or ten thicknesses of gauze into a cylinder about two inches long and a half-inch wide. This is attached to the nose with an adhesive strip, so that one end of the gauze cylinder projects over the nostril. A little perfume is dropped upon this projecting end. If the patient has a mustache, this may be used for the application of the perfume instead of the gauze cylinder.

In the selection of the perfume, the tastes of the patient should be consulted, but in Doctor Lombard's experience, preference has been given to the oil of bitter orange peel, taking care that the preparation was a fresh one.

FLIES, AND MORE FLIES

Out of 100 flies collected in a house, between 90 and 99 percent are the ordinary house-fly (*Musca domestica*), says A. E. Shipley, in an interesting article in *The British Medical Journal* (Oct. 17 and 24, 1914, pp. 662 and 705). However, for a short time at the beginning of summer, during May and June, *Fannia canicularis*, the "lesser house-fly," is said to be more common than the ordinary species. It is an interesting fact that, of the *Fannia canicularis* found indoors, from 70 to 75 percent are males, the females having remained outdoors, where they live and lay their eggs among decaying vegetation and fruit and also in fermenting animal matter and dejecta. Another species of the same genus, *Fannia scalaris*, known as the "latrine-fly," is a much more dangerous insect, since it breeds in human dejecta and thus becomes a very common carrier of typhoid fever.

The blue-bottle fly, or blow-fly, presents two species, namely, *Calliphora erythrocephala* and *Calliphora vomitoria*. Both of these flies deposit their eggs in fresh and in decaying meat, and for this reason they, too, are a source of considerable trouble, especially in army service. Furthermore, they not only lay their eggs in carcass flesh, but in living flesh as well, and their larvae thrive in sores, wounds, and tumors. Occasionally their eggs have been known to be deposited in the nostrils of animals and even human beings. Where maggots are found in wounds, they

are likely to be one or the other of these two varieties.

Another troublesome fly, which follows the camps, is *Lucilia caesar*. This has a predilection for dead meat, especially for stale fish, which the larvae will very soon eat clean to the bone.

Another species which occasionally infests human sores is the *Sarcophaga carnaria*, which may enter houses in search of filth or carrion, upon which to lay its eggs. This fly is viviparous, not producing eggs but live larvae. One female can give birth to 20,000 young.

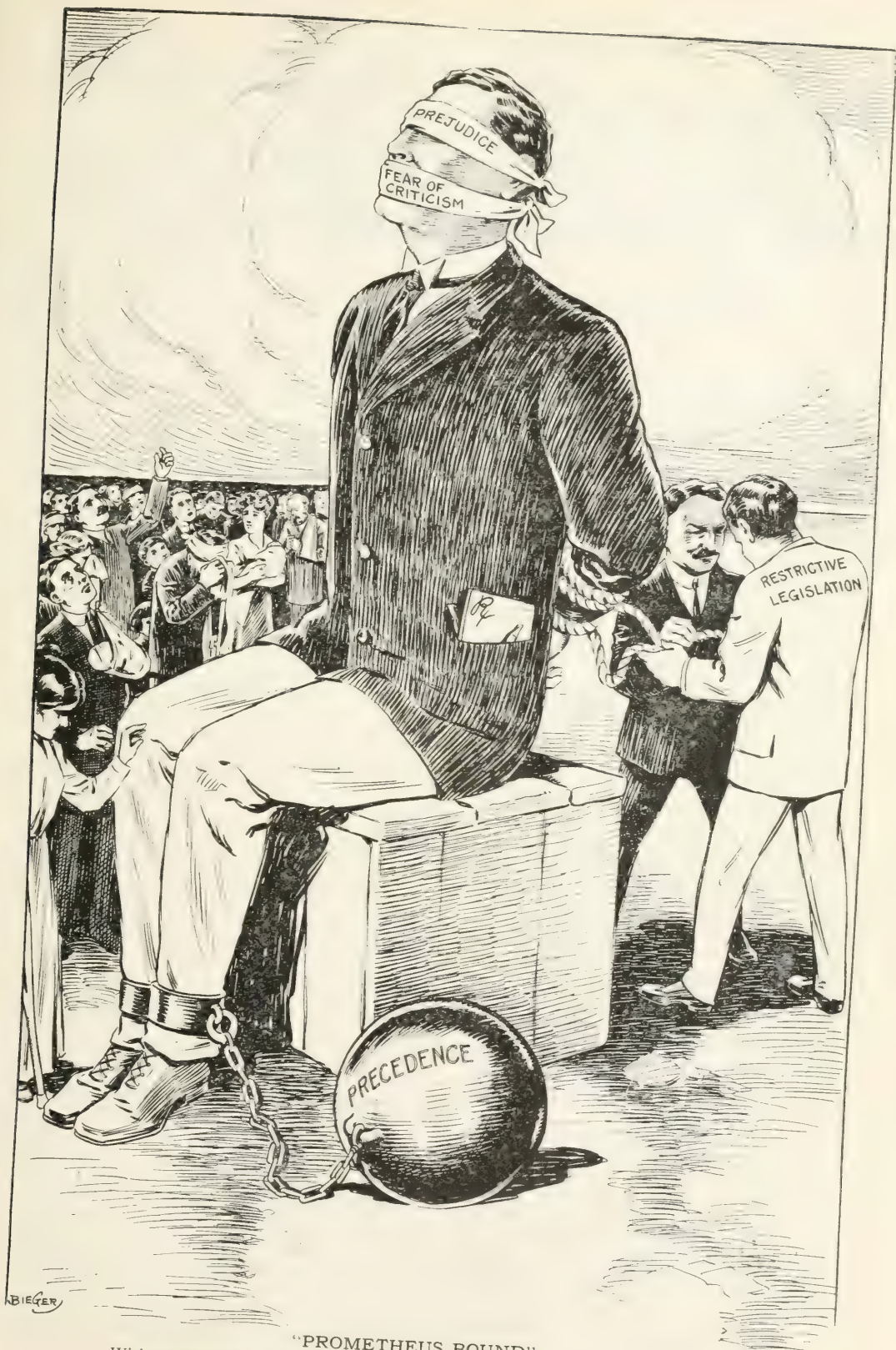
Infantile diarrhea, which so afflicts the poorer quarters of our cities in the summer, is undoubtedly transmitted by the *Musca domestica*; and there is much evidence to show that cholera, which has now become alarmingly prevalent in the eastern seat of the war, is disseminated by the same insect. Anthrax, or wool-sorter's disease, and epidemic cerebrospinal meningitis, are also transmitted by the bite of a fly, the latter by the *Stomoxys calcitrans*.

ON THE EXCRETION OF MORPHINE INTO THE STOMACH AND INTESTINES

Experiments conducted by A. Valenti (*Arch. d. Farm. Sper.*, 1914, p. 248; cf. *Ther. Monatsh.*, July, p. 521) tend to render questionable the notion held since Tauber and Faust's pronouncement, that the greater proportion of morphine is eliminated through the walls of the gastrointestinal tract and passed with the feces; and this irrespective as to whether it was introduced gastroenterally or parenterally.

The experimental animals were dogs, and the alkaloid was injected hypodermically. This is what the author found: When the animal was kept on a diet of meat and bones, about 50 percent or more of the morphine injected could be demonstrated in the intestinal contents. On the other hand, when the food was purely vegetable, invariably only small fractions of the doses were shown to be present.

The author does not venture a definite explanation of this phenomenon; he does suggest, however, that, since the ordinary food of dogs contains certain inorganic substances—such as the phosphate and the carbonate of potassium, which can act as disturbing factors—the method of testing according to Faust and Tauber may be conceived to indicate a larger amount of morphine present than actually is the case.



"PROMETHEUS BOUND"

With all his latent and kinetic powers, so ably expressed in this man's figure, what *might* the modern physician be, if he could but break these shackles?

Miscellaneous Articles

Credits—A Doctor's Problem

THE obligation of a debt is not the factor it used to be. Not so many years ago, credit was looked upon as an accommodation, something to be cared for, scrupulously protected. Men were proud of the fact that they were singled out for favor, that their reputation for integrity was such as to justify credit accommodation. Credit was then the exception, and not the rule, and no greater disgrace could attach to a man than to owe money which he could pay and would not. In this respect he was a marked man, not only in business circles, but in social as well.

All this has been changed with the wonderful expansion in business since the civil war, and the changes undergone in business methods. Today it is the average in general results that counts. With credit extended in every direction, charge-accounts solicited in person, by correspondence, and through advertisements in newspapers and magazines, the personal element is, to a large degree, lost sight of, and profits are calculated on the business after a liberal estimate is made for bad debts. It is the net results merchants are after. If by experiencing some losses they can increase their dividends, they will take the chances.

Meanwhile a delinquent debtor, who formerly was looked upon with more or less suspicion as an undesirable neighbor, is now regarded with high favor if he has other redeeming qualities. Times have changed, and the public is not over-discriminating. In fact, at the present time the question of debt does not enter into a man's appraisal by the general public, for it is more than likely that nothing is known about his debts, so common have credit transactions and consequent defaults become. And, if he is a good fellow, the public doesn't care.

If the question is raised that a man owes money, his friends will advance specious arguments why he should not pay. If it is a surgeon's bill, they will insist that he has been outrageously overcharged; if it is the medical man, "Oh, he makes his money

easy, let him wait for it," is the excuse. Perhaps, indeed, the doctor is charged with a lack of professional skill as the reason why he should not be paid. "I am worse now than when I commenced taking his treatment," is the complaint; or, the accusation is made that the patient is nursed along as a chronic for the purpose of running up a big bill. Any excuse will do for a delinquent. Even the charge of malpractice is sometimes raised for the purpose of discouraging collection.

We do not wish to say that business morals are more corrupt now than they used to be or that men in general have less regard for their honor. But, we will say that in individual cases the corruption is more marked than ever before, and less sense of decency is shown in business transactions; and these facts are unmistakable to every observing business man. It is a change of conditions, of the times, one of the extremes to which we have gone in many other directions.

As to credit transactions, however, we cannot get away from them, if we would. We must accept the conditions imposed upon us by modern business, and the doctor, less than any other man, can expect to receive cash for his services. It is not with him a problem of how to practice medicine for cash, but how to get in the money charged on his books.

Credit is universal—the system cannot be changed—and bad bills are the inevitable accompaniment of credit transactions. While some have solved the problem of minimum loss, others never will. And, apparently, the latter class is willing to go along in the old way, limpingly, satisfied to get in enough money from a good practice to pay current bills, but never getting ahead.

In successfully handling credits, extremes are to be avoided. To approach a debtor timidly in demanding payment, is quite as bad as to be overzealous. In the one case one is likely to lose the bill, while in the other he may lose the patient.

Illustrating the case of a doctor who was admittedly a poor collector, and whose genuine reluctance to present a bill was equaled only by his skill as a practitioner, I recall an evening spent in his office, a few years ago, in a social way. While we were sitting as usual before a grate-fire, enjoying "thirty minutes in Havana," the door opened and a patient entered, to get some advice concerning his young daughter, who was convalescing from a serious illness. Before departing he asked:

"Well, doctor, how much is Helen's bill? I want to pay it." Meanwhile he drew from his pocket a bill-book that contained some money, believe me. It would have bought a team of horses, at least such as the doctor drove at that time, or made a good impression as first payment on an automobile. Imagine my surprise to hear the doctor say:

"Oh, let it go until I get through with your son Bobby."

"No, doctor, I want to pay you now," said the man. "You've earned it. I can't tell you how grateful we feel. A week ago I thought we had lost the girl, but you pulled her through."

The bill-book was open on his knee, the money in sight, yet, the doctor demurred.

"I—I haven't got the bill made out. That's all right. I'll send it to you by mail. I don't need the money," he said.

With a very noticeable expression of disappointment in his face, the patient folded up his bill-book, gave the doctor a fat cigar, lighted a fresh one for himself, said good-night cordially, and went out.

The doctor was a friend of mine, a pal, wherefore I felt myself a privileged character.

"You're a good thing, you are," I said. "What's the matter with you? Don't you know that you hurt that man's feelings? He came here because he couldn't help it. He wanted to do something for you. He was filled with gratitude and the only way he could express it was by paying his bill—and you wouldn't let him. He would have made you a present in addition, had you permitted it."

"I know it, I know it," the doctor said. "Just to show you what a poor collector I am I'll tell you what I did yesterday. I put a bill in my pocket and went down the street to collect it. The debtor is a rich merchant, and as I neared his store I thought I would walk by first and look in. He was at his desk and all alone. I retraced my steps, but when I got to the door I couldn't go in, something seemed to hold me back, and I

came back to the office here without even presenting the bill."

Then, with a far-away look in his eye, the doctor added, "And I needed the money, too."

CHARLES B. POTTER.

Chicago, Ill.

WRONGS OF THE MONEY SIDE OF PRACTICE, AND THE REMEDIES

It seems to me that there are a few things wrong in the practice of medicine, and that one can easily point out, and just as easily find the remedies for them.

For example, there are the Osteopaths, who are gaining ground every day. In our state of Montana, I can name a dozen or more cities where they are doing a big practice and are so well intrenched that the laity consider them doctors as much as they do medical men. They treat everything in the category of disease, many of them openly advertising that they treat all acute diseases—naming a list of the commoner ailments—and adding that obstetrical cases are handled in an aseptic and osteopathic manner. A considerable number are having a larger practice than some of the capable medical men in the same towns. Why is this?

It seems to me that, as a class, the Osteopaths advertise very regularly, and among themselves it is considered all right. In this progressive age, no one can deny that advertising pays, and by this means the Osteopaths have established themselves in the public mind so firmly that the majority of the people, if not employing them regularly, at least resort to them at times. It seems preposterous that a man educated in Osteopathy should undertake to treat all acute disease; but, Doctor Robinson, of New York, considers them fakers pure and simple, and it is but natural that they carry out all the deceptions practiced by fakers. All the while the great medical profession stood idly by and allowed the different state legislatures ignorantly to legalize them. But, why not start something alive that will so open the eyes of the public that they will see the error of their ways.

A really good telegraph-operator decided to enter the doctor-ranks. Looking over the field, he concluded the Chiropractic path the quickest and easiest. He took a three months' mail-course in the science (?) of Chiropractic, came out West, stuck up a "shingle," then valiantly went to work

working the public for a living for himself. Such men as this one naturally are content, and can afford to stay in the business, taking patients from good medical practitioners, for the reason that they never were able to earn more than \$75.00 or at most \$100.00 per month, while the medical man of necessity must have more because the numerous necessary professional expenditures cut into his income, so that, unless he does a good business, he is bound to go back in his profession.

I know a man who started soliciting for an optical house in the East, who picked up enough of the rudiments of refraction to fit an ordinary case fairly well. He had no knowledge of medicine or of disease, but he came out West to work, at that time there being not even an optometry law. He had no scruples against talking people into having spectacles fitted; and he covered different towns and built up quite a reputation as an eye-specialist. A joke? It is the truth. Advertising did it. He has made more money in ten years than any practitioner of medicine in the state, unless it be some of the bigger surgeons.

What show has a good medical man who has spent good money preparing himself to do this work? The public even fear him, because optometrists have so advertised the dangers of using drops in the eyes that the people fall over themselves to give these fakers their good money, thinking the medical man is in business simply to put out their sight.

Then comes Christian Science. How intelligent, educated people can so forget all that is good and right in this world as to take this up is beyond me, and I have only one logical explanation. The average layman thinks the doctors make big money, and easily, and all he has to do is, to buy a few books from the Mother Church and start out treating the sick and ailing, getting good money for it. Then, after he lands a victim, he need not even be bothered about his coming to the office, for, the absent-treatments are given as long as the victim's money is not of the absent sort.

I questioned one practitioner why she did not straighten the crossed eyes of her daughter, and she answered that they were ever so much better now than they used to be. The girl was nineteen, and I suggested that a doctor could straighten them in a few days, while nineteen years of prayers and Baker-Eddy jargon had not helped enough for anyone else to notice the improvement. But

she very faithfully informed me that no limit of time should be placed upon the cures. Wonderful— isn't it?

Now, with these people cutting into the business of our profession, is it any wonder that many of the good men of medicine are merely making a meager income?

Here is the remedy that I would propose. Organize the doctors into an association or get-together club of national scope, in which nothing is required but a legal M. D. diploma. Then, if a large number take this up, the assessments would be quite small. Then a publicity campaign should be organized, of national scope, with branches in each state. Good speakers should be employed to give lectures aimed at educating the public in what to expect from a doctor, and opening their eyes to the impossible things of some of these fakes; doing this in a gentle manner at first. These lectures could be put on in some manner that would attract the public. Either make them sensational, as some revivalists do, or use some other method to draw the largest crowds. It is possible even that a good lecture, if managed properly, could be given in a civic-league course. Also, literature of benefit to the public could be distributed, and every newspaper could be induced to carry articles of interest, and helpful to this campaign.

Of course, the details of such a plan would all be worked out in a manner that would be conducive to best results. There are over 500,000 medical men in this country. Now, suppose 200,000 would pay \$1.00 per month or an even \$10.00 per year. That would be two million dollars per year, divided between the states according to the population. Certainly, a lot of good could be done toward educating the public in these matters that are so vital to us in a business way and so vital to the public in a more serious way.

Let us get busy now. Take a minute of your time and drop me a postal card, saying you are in favor of the plan if at least 100,000 others will join in for one year. This would give an idea whether enough would feel interested in this kind of thing. If you are afraid to obligate yourself, send a dime to help me put this matter before the profession at large. I will do more than my share; or else let THE AMERICAN JOURNAL OF CLINICAL MEDICINE handle this thing. Any manner that will bring this question to a point where something will be done.

Now, all this may be considered a pipe-dream, and maybe it is; but it looks plausible to more than one physician. So, what say

you? Let us wake up and turn the tide that eventually is going to swamp us. Do it now!

F. E. McCANN.

Big Timber, Mont.

[An interesting article, which should set us to thinking. However, I doubt the wisdom of starting new organizations for medical defense. We have the machinery—the organizations—already. The trouble is that we do not use it. We should begin at home, in our own county societies. A campaign of education as suggested by Doctor McCann, is greatly needed.—ED.]

ANOTHER TRIUMPH FOR EMETINE— A LETTER FROM SOUTH AMERICA

Emetine, which has revolutionized the treatment of amebic dysentery, solved the problem of pyorrhea alveolaris, done wonders in dealing with hemorrhage, has now gained another victory. A disease known here as "*la espundia*," otherwise "tropical sore," a manifestation of Leishmaniasis, has constantly baffled every form of treatment; salvarsan has been used with practically no effect in this trouble. But at last what appears to be a specific has been found in the alkaloid emetine.

About the end of last year (1913) Dr. Carlos Chagas, in the Instituto de Monroe de Rio de Janeiro, gave an account of his investigations of the "Epidemiology of the Amazonian Regions." *Inter alia*, he stated that he had seen cases of this ulceration of more than twenty years' standing, resisting every therapeutic measure, and that they are mostly considered incurable. But now, thanks to the discovery of Dr. Gaspar Vianna, injections of emetine have proved to be an infallible remedy. He stated that he had witnessed most surprising recoveries. Emetine hydrochloride is used, it appears, in a similar manner to its employment in dysentery, and with like speedy and satisfactory results.

This is good news not only to the dwellers of the Amazon basin, but also to many in other tropical lands.

R. J. BURROW.

San Pedro de Buena Vista,
Bolivia, South America.

[Among the readers of CLINICAL MEDICINE there are many who are practicing our profession in tropical countries—in India, China, Korea, the Philippines, Central Africa, and

South and Central America. Many of these should have occasion to treat ailments similar to those described by Doctor Burrow. It is becoming more and more apparent that emetine occupies a place in tropical medicine not inferior to that of quinine, and it may be that its place as a specific is even higher than that of the alkaloid of cinchona bark. Time alone will decide. However, I am convinced that we have but just begun to realize the possibilities of this remarkable alkaloid.

Be sure to read the abstract of Doctor Frazier's article on page 453. As you will see, the doctor believes that emetine is as clearly a specific for typhoid fever as it is for tropical dysentery, tropical sore, and pyorrhea. Is he right, or is he the victim of his own enthusiasm? Isn't it *right* that we should find out, positively, for ourselves?—ED.]

CAPITAL PUNISHMENT—FROM THE STANDPOINT OF A LIFE PRISONER

[Continued from page 271, April issue]

I happen to know of some ex-convicts. Some of 'em who are out in the world today. One of these happens to own two of the greatest papers in Ohio, both fearlessly independent and progressively for social welfare. He also owns a shoe factory where he employs about 600 people, and he has never had a strike. He is also a director of a couple of banks, and yet I never heard any one in Columbus, Ohio, express a desire that millionaire Bob Wolfe, Colonel Robert L. Wolfe, if you please, be castrated. He'd been a great success if he'd been castrated, eh?

Then up in Detroit is one of the highest salaried men in our commercial world. He draws down \$72,000 a year—\$6000 a month. He was a bookkeeper sent to prison for embezzlement. He made good use of his time, just as I'm trying to do; and when he came out he was a cost accountant and a dandy. After a time he did some work for Henry Ford and did it so well that he was given other work. The wonderful engineering and efficiency systems of the Ford shops are largely due to W. A. Hawkins, commercial engineer and ex-convict! Wonder if he, too, should be castrated?

Pshaw! I could go on naming dozens of such instances—and castration would "prove an ideal penalty," eh? Rubbish!

Now, then, I'll leave your editorial writer alone and come up alongside your craft for awhile and try my batteries. And first, let

me admit in all frankness that three or four years ago I was with you heartily on the vasectomy proposition. In a booklet printed by me three years back I boldly advocated the enactment of a broad law for vasectomizing in Arizona—broader than the Indiana or New Jersey law. To make it stronger, I even offered to be the first to volunteer for the operation.

Today, I should be the first to fight the passage of such a law, save for the incurable insane and certain types of feeble-minded. I should be the first to hire attorneys to combat any action society might take on Arizona convicts. It was nothing of theological influence that brought about this change. I've studied the records of "The Jukes"—have studied the tables prepared by Doctor Goddard of Vineland and many other things—but today I'm at opposite poles to my position of three years ago. I'm mighty proud, too, to have been able to change around, for he who dares not change his views is either a stupid ass or a reactionary dolt acting as obstacle in the path of progress.

What brought about this change? A number of things. First, further studies on heredity with alcoholics and neurotics, as given in a number of publications more modern than those which I had originally studied. I do not believe in heredity as a large factor in criminality. When I argued in favor of vasectomy I admitted that same belief, but said the danger was not so much because of any hereditary criminality as it was because the *environment* of the criminal parents was such that children could not as a rule overcome! Environment, rather than heredity, is the larger cause in the matter of parental influence. I've known too many criminals' children to be successes to accuse heredity of being at fault for the weaknesses of others.

In my opinion—and mind, Doctor, I offer this merely as an opinion—the prevailing causes for crime are: *environment* (which includes faulty home and school training); *physical and mental deficiencies* (and about 35 percent are physically defective and about 30 percent mentally deficient, according to Binet tests); *poverty* (and this must be admitted as a social cause, for crime increases with poverty and declines in prosperity); and, finally, *booze*. There are other incidental factors, with perhaps heredity leading these lesser causes.

I am nothing of a Socialist, but I assert that socialism, with the elimination of both booze and poverty, would do away with about 60 percent of all crimes against property; and

elimination of alcohol would cut down more than half of the crimes against person!

It is a damning indictment of our Christian civilization when 95 percent of the 1600 inmates of the Eastern Pennsylvania Prison, and all of the inmates of the Oregon Prison, petition their legislatures to abolish the drink traffic and say that 70 percent of crime is due to drink. It is a reflection on Warden Allen of Joliet when he refused to allow the inmates of his prison similarly to petition the Illinois legislature. It shows his political alignment, and I think you have a pretty strong fight on the booze question in Illinois this year.

Booze doesn't do it all—but booze finds easier working conditions when the drinkers are mentally and physically deficient. Yet, has your editorial friend made any proposition to castrate the booze peddlers and the respectable brewers and distillers? Oh, lawsamassy, no!

But back to vasectomy. Is it not a comparatively useless operation? If a man is operated upon tomorrow and discharged five years from now, another simple little operation restores his generative functions. So what is the good of vasectomizing a man if \$25 puts him back into normal condition again? I'm a little bit afraid that morally it will defeat its object, since it will make the man a moral pervert, a panderer, a debaucher of women and girls who might otherwise remain clean, for the "fear" is removed from their association with such a one. I've made a close study of the work of Doctor Sharp and Doctor Hurty in Indiana and I'm not a bit satisfied with it—most of the reports have come from their side of the fence.

But, what makes more of my antagonism to vasectomy is my own case. Right now—today—after serving four terms, I'm aspiring to become a father. After having gone down and wallowed in filth I am daring to look forward to the day when a clean, pure woman shall share my lot and dare to work with me for the future, for the home and for happiness. If I can come up out of an unspeakable filth and cleanse myself in her love and in the fine friendship you (among others) give me, who shall say any other man is debarred, simply because he has been antisocial?

I'm talking to you as a medical confessor now, but, when I say to you that I have come up from perversion to cleanliness of mind and body; when I tell you that I'm thinking of my wife-to-be as a shrine of love and veneration rather than as a spoil of lust; when I tell you that although we may be

married six months before our home is built, that only in the sacredness of that home will the real nuptials take place; when I think that every uplifting thought I breed in my mind is to be reflected in the character of my children—then, and then only, will you understand the distance I have come and why I say that there is no right, no justice in vasectomy, for what I have done, morally and spiritually at least, every man in prison can do—for I was of the vilest.

All men may not achieve as much as I in mentality, or in work—but, all men can *clean up*, and when they shall become clean, I challenge you to claim any right for vasectomy. I used to sneer at the good people who would quote

“While yet the lamp remains to burn,
The vilest sinner may return.”

I'm not a goody-good by a darned sight. I refuse to attend most of the church services here; don't pray, unless living up to some ideals be prayer; not a bit religious in a theological sense; but I've found out the absolute truth in that little couplet I have just quoted.

Kindness made me what I am; encouragement helped me to achieve; friendship, fraternalism, love—and these things can redeem any man. Depressive, repressive prison-systems are the darnedest hells Christians build as monuments to their civilization! The American prison system, as a general thing, with allowances for certain exceptions, has been condemned by every editor of a prison paper in this country, bar none. It is jackass in its aspect and jurassic in its age. But, the environment in which we raise our young and the inefficiency of our common school system is even worse, and all these things have their parts in the making of criminals. It is these things that I want to tell the world some day; and when liberty comes I shall, for I'm pretty near as good a speaker as writer. I owe the man behind walls a duty; I owe society a duty; I owe myself and my fifteen years of prison a duty—a duty to do my share towards making them humane and efficient.

And, when it comes right down to bed-rock, what is a convict but your next-door neighbor? He goes to prison and society draws a line the minute he enters the walls and calls him a convict. He comes out, and he becomes again a part of society. The question for you and all editors, medical editors especially, for I've more faith in them and in business editors than all the

rest—the question for you to solve is, *how is he to come out?* Better or worse than he came in?

Is it not a fact that most prisons are culture tubes for tuberculosis? Culture tubes also for a more dread disease, moral weakness? Does not the continual monotonous program make for a loss of all initiative, invention, independence, moral stamina? How much opportunity is there in our American prison when one of 'em allows its inmates to write and receive *one letter in two months*? Another allows you to write *only* after you've been there six months! Very fine for the father or son or husband? But, I have gone too far and will have perhaps aroused you enough at that to have you get into the game with an enthusiasm. And that is my business of life, bringing your kind of folk over to see my way. I'll do it, too.

Earnestly,

LOUIS VICTOR EYTINGE.

Florence, Arizona.

[A wonderful letter from a brilliant man, who is doing a work that should shame the best of us into lives of greater earnestness and nobler courage. Write him—and write Governor G. W. P. Hunt.—ED.]

ACTIVE PRINCIPLES

Knowledge is a process of accretion. We attain knowledge by iteration and reiteration of facts. And facts are stubborn things. They must be, else they would not overcome our ingrown reluctance. One would think that a good thing, once demonstrated to be a fact, would be accepted without further mental repugnance. But it is only by iteration and reiteration that one of the good things, the active principles, will become a universally recognized fact; and then internal medicine will progress rapidly to its appointed place in the science and art of exact medicine.

Claude Bernard says: “The first condition for the progress of medicine is, the use of substances having an exact composition, capable of an exact dosage, and with which it is possible to measure the effects produced.” And do not the active principles of our remedies meet these requirements? When we prescribe a remedy, we do so, presumably, to obtain a certain specific result. We expect results, and can get them positively only by the use of the active principles.

A drug acts only on those cells or tissues with which it can enter into chemical union,

and must be rendered acceptable to those cells by hydrolysis through the action of body-enzymes. The active principles are substances having an exact composition and are in a form more acceptable to the cells of the body than the usual preparations of the galenics, with their preponderance of inert indigestible matter. This would seem so obvious that the statement of the fact ought to suffice to procure its instant adoption. Yet, we see doctors who depend on tincture of aconite, so often found inert, when aconitine represents the full activity of the drug; and on other like tinctures so frequently made from the dried drug or from a shelf-worn fluid extract.

The argument that during the process of isolation of an active principle from the parent drug the resulting compound may be very different from the active principle in the crude drug is not pertinent, nor is a second argument, that the active principle does not represent the totality of remedial action of the parent drug. It may or it may not. Aconitine does, pilocarpine does not; atropine does, quinine does not represent the therapeutic activity of the crude drug.

If a drug has any remedial action, it depends on the active-principle content, and if it is possible to isolate this principle, that is the part that should consistently be used. The principle should be used because it is definite, exact, pure, easily administered, easily assimilated. Its chemical composition shows its relation to the polypeptids, complex nitrogen compounds resulting from the cleavage of peptones, which are chemical aggregations of various polypeptids, with the elements C, H, O and N in varying proportions.

Tyrosine, an amino acid, found among the products of pancreatic digestion, has a formula of $C_9H_{11}NO_3$; adrenalin, $C_9H_{13}NO_3$; morphine, $C_{17}H_{19}NO_3$; atropine, $C_{17}H_{23}NO_3$; this showing a very close relationship.

The alkaloids are seen to be amino-acid-like compounds, or polypeptids, and are instantly available for assimilation by the various cells of the body, to which they are carried by the blood stream. The cells of the body have a selective affinity for drugs as well as for foods, and the markedly different therapeutic action of drugs depends upon the affinity of this or that type of cell. Most of the active principles find their affinity in the cells of the central nervous system, wherein are contained the vasomotor, cardiac, and respiratory nerve-centers; and upon this affinity depends their great potency.

To see that this selective affinity does account for the diversified action of drugs, study the action of atropine, $C_{17}H_{23}NO_3$, and that of pilocarpine, $C_{11}H_{16}N_2O_2$, the one preventing the excretion of sweat, the other our great diaphoretic; of emetine, $C_{15}H_{22}NO_2$, expectorant, hemostatic, and amebicide; and stovaine, $C_{14}H_{21}NO_2$, a local anesthetic; of aspidospermine, $C_{22}H_{30}N_2O_2$, the remedy for all dyspneic attacks; and strychnine, $C_{21}H_{22}N_2O_2$; and novocaine, $C_{13}H_{20}N_2O_2$, a local anesthetic.

The study of the chemical composition of these and other well-known alkaloids shows that their physiological action is closely connected with their chemical composition and that those of a closely allied chemical composition have similar physiological action. Novocaine, stovaine, and cocaine are very closely related chemically and also physiologically. Scoparin, convallamarin, digitalin, and strophanthin are all cardiac remedies and are chemically similar. They are compounds of C, H and O, and their complexity increases from scoparin to strophanthin, scoparin having the chemical formula $C_{20}H_{20}O_{10}$ and strophanthin, $C_{40}H_{66}O_{19}$. Their physiological action increases correspondingly, scoparin being a weak heart remedy, while strophanthin probably is our greatest (most powerful) heart remedy.

So with the expectorant remedies. Emetine, apomorphine, lobeline, and sanguinarine are analogous chemical compounds, with the following respective formulæ: $C_{15}H_{22}NO_2$, $C_{17}H_{17}NO_2$, $C_{18}H_{23}NO_2$, $C_{20}H_{15}NO_4$. Sanguinarine, however, is derived from the papaveraceæ and is closely related to the narcotic drugs, and is almost identical with berberine, the formula of the latter being $C_{20}H_{17}NO_4$. Small doses of either of these drugs increase the appetite and the digestion, strengthen the heart and slow the pulse; and in large doses both cause death through respiratory paralysis. Berberine is a bitter tonic and a contractor of all relaxed tissues. Sanguinarine is one of our most satisfactory respiratory stimulants and is used as an expectorant in the young and the aged.

Quassin and santonin are closely related, are both bitter tonics, both act as vermifuges, quassin acting on threadworms, santonin, on roundworms. The narcotic drugs, morphine, atropine, and hyoscyne, are analogous chemical compounds. Aconitine, veratrine, and gelseminine, our three great remedies for active congestion, are synergistic remedies, and are complex chemical compounds with closely related formulas.

The active principles not only are in a form most acceptable to the cells and tissues of the body, but, what is much more important, they are constant, pure, exact, and definite compounds. We know what we are giving, just how much we are giving, and the dose can be increased or diminished as we may desire, and we can expect, and do get, a constancy of action not to be looked for from the galenical preparations. They have an exact composition, they are capable of exact dosage, and it is possible to measure the effects produced.

Dr. Nathan Rosewater, in *The Cleveland Medical Journal*, says: "He who is skilled in the use of drugs has at his command an agency potent for good, convenient of carriage and easy of administration, definite in quality and length of action, often immediate in results; one requiring no loss of time, no machinery to operate, no expensive attendants, giving the prescriber time to visit others while safely trusting the repetition of the dose to keep up the action; so handy that it may be tritely said, 'the medicine works while the doctor and the patient sleep,' so practical that electricity, physical exercises and manipulations, and even the surgeon's knife, and so on, pale into insignificance beside it."

And that is the role of the internist! It is his important work to remove the cause of the disease after the surgeon has removed the disease; for instance, gallstone-disease. One often sees a case of this disorder recur after complete removal of the gall-bladder, and the patient suffers pain and distress of similar character to the attack for which an operation was performed. An operation for appendicitis does not cure the constipation that caused the attack. Intestinal stasis is not always removed by operation. Habits of long standing still persist in their effects, and are to be remedied both by their reformation and by the indicated treatment.

The internist must use those drugs whose actions can be accurately measured, if he would keep up with the progress we may expect in the art of medicine. This is the age of science, and our remedies must be as scientific as it is possible to make them. They must in truth be "arms of precision," and their specific action should be defined so as to be accurately applied to the cure of disease. Many of our drugs have been thus defined and their indications are well known. Their field of action, however, is not as certainly outlined as it should be. Only by the study of remedies of exact composition and their

specific application to the cure of disease will progress in medicine be made, and the internist take his rightful place.

R. J. SMITH.

Bancroft, Ida.

BANQUET TO DOCTOR JACOBI

A testimonial banquet will be tendered Dr. A. Jacobi by the medical profession, his friends and admirers, under the auspices of the Bronx Hospital and Dispensary, on the occasion of the eighty-fifth anniversary of his birthday, on May 6, at the Hotel Astor.

To give the younger members of the profession an opportunity to participate in the celebration and to come in contact with the venerable nestor of American medicine, the price per plate has been fixed at three dollars.

The medical men on the Committee of Arrangements are: William J. Robinson, chairman; Arpad G. Gerster, Willy Meyer, S. W. Lambert, J. Brettauer, Francis Huber, A. A. Berg, M. Rehling, S. A. Knopf, H. Edwin Lewis, M. Aronson, Otto Schirmer, Max Rosenthal, Henry Heiman, A. L. Goodman, A. Hymanson, Alex. Goldman, A. A. Brill, A. L. Goldwater, H. Schumer, H. J. Epstein.

Communications should be addressed to William J. Robinson, M. D., 12 Mt. Morris Park West. Reservations for seats should be sent to A. L. Goldwater, M. D., treasurer, 141 West 121st Street.

PROSTATIC ATROPHY AND MUMPS

The close connection between the parotid gland and the testes is well known. That an attack of parotitis may result in atrophy of the testes, in aspermia or azoospermia with complete sterility is also well known. Hardly known, however, is the connection between the parotid and prostate, and still less known is the fact that an attack of parotitis may cause atrophy of the prostate without apparent involvement of the testicles and the spermatogenetic function. The sterility may, however, be just as absolute nevertheless, for a normal prostatic secretion is an important constituent of normal seminal fluid, and its absence seems in many instances to be alone responsible for the lack of fertilizing power of the latter.

The writer has had seven cases of partial or *complete* (so complete that not a vestige of prostatic tissue could be made out) atrophy of the prostate, in which an antecedent parotitis seemed to be the sole etiologic

factor; in some of these cases (five) the atrophy was accompanied by atrophy of the testicles; in two the testicles seemed to be unaffected. These interesting cases will be reported in detail later on. But the object of these lines is to call the attention of the profession to the connection between the parotid and the prostate and to ask them to report either in the pages of your journal or to me directly, any cases of prostatic atrophy in which parotitis was the positive or probable etiologic factor.

The relationship existing between far distant glands, organs and tissues and the genital organs forms a fascinating field of study and research.

WM. J. ROBINSON.

New York City.

MAKE YOUR PREPARATIONS NOW

This year the vacation attractions will take many physicians to the Pacific Coast. First, the American Medical Association meets there in June; second, California has two big fairs—one in San Diego and the other in San Francisco—both of which can be taken in on the way.

Since such a trio of California attractions is but rarely presented, and, inasmuch as there is war in Europe and likely to be for some time to come, there is no better time for American physicians to get acquainted with the possibilities and beauties of this great land of ours than during 1915. Certainly every physician living east of the Alleghany Mountains should direct his travels westward, rather than eastward, when warm weather comes.

ACHIEVEMENTS OF THE MEDICAL PROFESSION

Some years ago, at a meeting of the Kansas City alumni of the University of Michigan, the visitors—those who had attended the great Michigan school, and who now resided in different parts of Oklahoma, Kansas and Missouri—held a banquet at the Coates Hotel. President James B. Angell was the guest of honor, the occasion being the thirty-third anniversary of his presidency of the University. Professor Victor C. Vaughan, dean of the Medical Department, was also present, likewise the dean of the Law Department. About 350 persons sat down in all. Among the nine at the speakers' table was Dr. V. E. Lawrence, author of the article upon typhoid fever which appears in another part

of this number. Doctor Lawrence responded to the toast, "The University, a Pioneer in Advanced Medical Education." The following remarks closed his address:

"The medical profession is unique, in that it is its own discoverer. The old Mosaic law is the foundation of the legal profession. The Bible is the inspiration of theology. But it remained for the medical profession to discover and hew out for itself a profession, without, in the beginning, having a ray of light given it upon anatomy, chemistry, physiology, pathology, surgery or treatment. The achievements of medicine and surgery are unparalleled in human endeavor. No others for a moment compare with them. Silently, and to a large degree unknown to the masses, it has accomplished a work of lasting and incomparable benefit to mankind."

In view of the work that Doctor Lawrence has himself done to advance the cause of medical science, and to help in the conquest of disease, it seems particularly appropriate to reprint these remarks at the present time. The readers of this journal are to be particularly congratulated upon the fact that they have been first to read the records of Doctor Lawrence's work in clinical fields, in bringing to the medical profession a successful method of treating croup. There is no doubt at all in the mind of the writer that he has contributed to the saving of thousands of lives.

ANOTHER GOOD METHOD OF TREATING DYSENTERY

So wonderful has been the success and so marvelous the cures wrought by emetine and ipecac that one is almost led to believe it a crime even to attempt the treatment of dysentery without first having given emetine a trial.

In my student days a large majority of the dysenteric cases persisted from two to three weeks only. As proof of its duration and severity at that time, one aged man asked me to stay all night at his place, saying with tears in his eyes that one doctor lost two cases of dysentery in his family at one time; but he (the doctor) did his duty, for he remained with them night and day for two weeks. He was censuring me for not staying all night to see if the medicine acted properly.

To make a long story short, emetine is not "the whole cheese." Its expensiveness is a heavy burden on the physician, should he have many patients who are unable to pay their bills.

Judging from my experience in Kansas and Oklahoma, it is my candid opinion that epsom salt and aristol, with Dover's powder, will accomplish as much or even more than the much-vaunted emetine.

If this be treason, make the most of it!

Without going into details of etiology, rationale, and so on, suppose you try, in your next case of bloody flux, four heaping tablespoonfuls of epsom salt in an ordinary cupful (8 ounces) of water, a teaspoonful to a tablespoonful of this mixture every hour until the stools are watery and free from blood. You can confidently rely on improvement in from twelve to twenty-four hours, in nine out of ten cases. Then administer at once a large dose of aristol and Dover's powder, or aristol and some astringent, followed by a few smaller doses (with a suitable diet) for a few days.

This has been my treatment for years, and I never make more than two visits, and seldom more than one, to the patient.

One case, occurring about twenty years ago, illustrating the beauty of this treatment, seems almost indelibly stamped on my memory.

The patient was a child, two or three years of age, and it had been passing apparently pure red blood for three days. Afraid to try the magnesium sulphate on account of weakness, three more days were wasted in temporizing with other remedies, but without improvement.

With fear and trembling the "salts" were prepared, as a last resort; in twelve hours the "flux" was a thing of the past, and one large dose of laudanum followed by a few doses of Dover's powder started the child on a rapid convalescence.

I sometimes feel that one might consistently headline an article, "Bloody Flux Made Easy," so confident am I that this form of treatment of dysentery will effect a cure every time.

So long as my results are so invariably favorable, it seems to me radically wrong to change to a treatment which, to say the least, gets no better results.

W. M. HATFIELD.

Mulhall, Okla.

[Doctor Hatfield is a good fighter, and I like his spirit. However, we have no quarrel with him at all. For the average form of dysentery, as seen in our northern states, the magnesium-sulphate treatment gives satisfactory results and gives them quickly. It has been widely used, all over the world—

"from Greenland's icy mountains to India's coral strands"—and in most acute forms of dysentery, including the type caused by the Shiga-Flexner bacillus, it deserves early and careful trial in association with other indicated remedies, as so beautifully described by the Doctor. But it will not cure amebic dysentery, which is essentially chronic in type, with recurring exacerbations, persisting from month to month and year to year, and prior to the introduction of the emetine treatment rarely cured completely.

Many of us northern doctors have never seen a case of true amebic dysentery; the farther south we go the more common it becomes, till along the hot river bottoms and coastal plains it occurs very frequently. It killed many of our soldiers in the Philippines, and in India, China, and tropical countries generally it is a deadly scourge. Many cases of the disease have been brought to us in the north, and once in a while a sporadic one will be found, for which no explanation can be given. It is, therefore, important that every physician should be on the lookout for it. For this reason our advice has been, and is, that physicians should view with suspicion any dysentery showing a tendency to become chronic and refusing to yield to ordinary methods of treatment, such as that described so beautifully by Doctor Hatfield in this paper. *In such cases try the emetine*, no matter where you live. It is expensive, it is true, but far cheaper for the patient than a chronic illness, from which there is no assurance of complete recovery without it. Real specifics, which cure quickly, are the cheapest medicines of all in the long run, no matter if the initial cost is high.

For the average case, as we have already said, Doctor Hatfield's method of treatment is fine, although we should be inclined to disinfect the stools thoroughly with the sulphocarbolates after the brisk and thorough saline purging which he advocates.—ED.]

DETAILS OF TREATMENT OF PYORRHEA—FROM A DENTIST

The emetine-hydrochloride treatment for Riggs' disease seems to have taken the public by storm. Patients are dropping in to see if they have any trouble with their gums, and, if so, to take the treatment; but many have told me that So-and-So's dentist just uses cotton wrapped on a "wire" and mops the gums.

Judging from the literature in the various dental journals for the past year, emetine

seems to have a future, but I feel that its great value to humanity, especially as to the mouth, is going to be cheapened by the suggestion of the use of cotton wrapped around a broach. Two or three patients have dropped in who have been talking to the patients of other dentists, and they did not even have the emetine applied with the syringe.

Permit me to state how I proceed before using emetine. When a patient presents himself for the first time, I insist on a thorough scaling of the teeth, as you advise, then they are polished. Then I give him a few mouthfuls of hydrogen dioxide and glyco-thymoline, half and half, to rinse around for a few moments. I then use my compressed-air atomizer with glyco-thymoline and then place nozzle close between every tooth in the pocket region and cleanse as thoroughly as possible. Then I make cotton rolls and place them around the upper or lower teeth; then I dry out the interdental or gingival spaces with cotton, and then, as you suggest, with the hypodermic syringe with blunted needle, I fill each pocket and hold it in for some moments. Now I feel I have done the very best for my patient. There is not one mouth in a thousand that is benefited by cotton or hypodermic applications unless the mouth has been prepared.

I injected an ampuleful into my arm, and there was no more annoyance than if I had merely pricked my arm with a needle.

One of my patients, a Doctor Richter, in the Bureau of Agriculture, asked me what had been my experience with "bleeders." His son is a very frail child, and when any cut from fall or knife occurs it bleeds for hours, and sometimes he must be sent to the hospital before the hemorrhage is checked. Have you any data on that subject?

One more question: Have you any data as to cures of arthritis deformans or thickening of finger-joints? I have it, unfortunately, in both my hands, especially in the left. I am 54 years old, weigh 155 pounds, stand 5 feet and 6 1-2 inches; I enjoy good health, have not lost an hour from practice through illness for years. From your data, which would be the better form in which to take emetine for this rheumatic trouble, the tablets or the ampules?

EGBERT A. CLARK.

Washington, D. C.

[I suspect that Doctor Clark did not intend for us to print this letter, but it provides a text for a short sermon, so we can not resist the temptation to put it in.

Emetine certainly has a "future," as Doctor Clark says—and to perpetrate an Irish bull, its future is already here: as to the value of this alkaloid in pyorrhea there is no longer reasonable doubt. Yet not every dentist succeeds with it in every case; and "there's a reason" which the Doctor more than hints at. Mere routine treatment, lack of thoroughness, carelessness about details—these inevitably lead to failure. It is by no means enough merely to swab off the gums with a little emetine solution on cotton.

The doctor goes about the matter in the right way. He first "cleans up" the diseased area by scaling, removing necrotic tissue and polishing the roots when they need such intervention. The next thing is to make sure that *in some way* the emetine-hydrochloride solution is brought into contact with all the diseased tissue—that it reaches into every corner of every pocket. There are different ways of accomplishing this, and we shall not undertake to say which one is best. That is something the dentist can solve better than we can. However, perhaps some apparatus, like that of Dunlap, which permits the forcing of the solution in exceedingly fine spray into all the nooks and crannies, acts as well as anything.

Doctor Carmichael, of Milwaukee, a man known to pretty nearly every good dentist, was in to see me the other day, and gave me a good point (one of many) which deserves emphasis. That is, the necessity of "keeping clean" the treated areas after the patient has left the dentist's office. This can be done in various ways, the essential point being to provide against the filling up and fouling of these half-treated and partially cured pyorrheal sacs in the intervals between oral treatment.

The emetine should also be given hypodermically in all severe cases of pyorrhea. Occasionally it may cause considerable irritation, but this is always quite bearable. Inject it warm, as suggested elsewhere and use the ampules.

Emetine is certainly effective in the arrest of hemorrhage, but we should not expect it to prove of permanent value in the treatment of hemophilia, in which there is deficient coagulability of the blood. It should be tried for relief of pressing symptoms, but other remedies should follow, for instance, the lime salts, coagulose, and injections of normal serum.

It is not safe to make promises of *cures* in cases of arthritis deformans, even when not very pronounced. However, if there is pyorrhea it should be treated and cured by

the use of emetine. Any disease of the tonsil should be eliminated, even by removal of these offending glands. Also, look to the bowel, and have the urine examined for indican and high acidity. These three disease-producing foci—the gums, the tonsils and the bowel—should always be investigated in every chronic joint affection; and *urinary hyperacidity should never be overlooked.*—ED.]

CURRENT COMMENT BY A COUNTRY DOCTOR

Giving Patient Copy of Prescription.—Is this advisable, or are there reasons for doing it? Neither. Why? Because, in the first place, it leads to self-medication—an essentially dangerous thing. Even the trained practitioner realizes that “the physician who treats himself has a fool for a patient”; and this saying antedates the old aphorism, “Physician, heal thyself.” Whenever the writer has been ill, he has placed his case in competent hands; and when his attending physician explained what he was giving, the gentleman has been told, briefly, and as quietly as the irritableness of a sick man permitted, to go ahead and prescribe the indicated remedy and to put it in such form as to preclude its recognition by taste or smell.

Now, if the physician is not capable of giving his own symptoms the proper analysis and treatment, certainly the layman can not. There is altogether too much self-medication. Suppose I visit old Zack Z. tonight (so cold, I trust it will not happen) and find him suffering from pneumonitis. The indicated remedy is gelseminine, which does its work, and tomorrow this is followed by bryonia, for the relief of the pleuritic symptoms then evident. Under the proposed legislation, which, if not suggested in all seriousness, would be utterly ridiculous, I have to give Zack the prescriptions showing the drugs used each time. The results are satisfactory to the patient—consequently, these remedies “will cure pneumonia.” So, the next time there is pneumonia in the house, or in one of the neighbor’s family, all that will be required is, to get the same medicine and give it as in Zack’s case.

Now let us suppose that this new case does not call for the remedies given Zack, but, on the contrary, aconitine and cactoid are indicated. This, of course, presuming that the guesswork, home-made diagnosis is correct. Where was the patient either protected or benefited by my leaving the copies?

This just places the question in the light in which it should be viewed for the patient’s benefit. As for the assertion that the public should in this manner be protected from the ignorance of the physician, it is without foundation, in view of the present stringency of practice requirements. A physician can not always wait to have his prescription taken to a drugstore, anyway, and the percentage of errors made by the physician at the bedside or when doing his own dispensing is practically nil. The mere fact that he is dispensing his own remedies will make him doubly careful.

When feasible, the writer gives prescriptions (but never for original containers), using as good Latin as he can command, adding the injunction not to refill or to give copy. This he considers best for the patient as well as for himself. Imagine Friend Zack discriminating between the niceties of the use of digitalis, strophanthus, or cactus, or even as to the inadvisability of using any of them.

If such legislation is proposed in any state, the physicians should wake up and put up an organized howl—pardon me, I should say, a cohesive and logical protest where it will do the most good. The Harrison measure, as it stands, gives the public all the protection needed regarding the handling of habit-forming drugs.

The writer is a pharmacist (by examination) as well as a physician, and a new idea suggests itself. If it is necessary to exercise a certain control over my action as a physician by a pharmacist, why can I not go to see Zack as a duly examined and licensed physician, then go into executive session and appoint myself as the duly licensed and examined druggist to fill the prescription? If not, why not? Will there be a provision to prohibit this in any proposed freak legislation? The very essence is, that the doctor presumably is unsafe as a physician; so, why not just doublehead on the patient and divide what I get out of him between my M. D. pocket and my Ph. G. pocket. It certainly is proper to insist on logical reasoning and to put forth hypothetical questions, if need be, to bring out argument.

Enuresis. Arbutin.—There is no class of cases in which relief is more gratefully received and results are more conspicuous than in incontinence of urine, and there is none in which fewer failures need occur, provided a careful analysis of the symptoms as well as of the urine is made. Of course, cases where a gross lesion or neoplasm requires surgical measures are not here alluded to; but, if pro-

nounced paralysis of muscular or nervous tissue governing the function does not exist, it is remarkable what results can be obtained with properly selected remedies. Incidentally, often a washing-out of the bladder can be accomplished by internal treatment, thus avoiding the inconvenience and worry to the patient of the cruder mechanical method. Many times reducing hyperacidity or alkalinity and exhibiting hexamethylenamine, together with copious drinking of distilled water, is sufficient; but, of all drugs, the most frequently useful, in the writer's hands, has been *uva ursi* and, of late, its main active principle, the glucoside arbutin, upon which its virtues in urinary troubles seem to depend.

This is another instance in which the indications of an active principle and of the whole drugs are not identical, as in the latter the large percentage of tannic and gallic acids present as well as other substances often are undesirable. The arbutin is a safe drug and of broader indications than almost any of the group used in similar conditions.

Uva ursi is a good oldtime official remedy, even arbutin having been isolated from it as far back at least as 1853; why it has not received the full recognition merited is a question. Now that arbutin is readily obtainable, it is to be hoped it will attain the place to which it is entitled. Every physician in general practice or in genitourinary work needs an ever reliable, nonirritant, stimulating diuretic, with antiseptic powers added and with the virtue of frequently reducing albumin (not its percentage by reason of dilution, but the actual output in twenty-four hours).

Any doubt about the efficiency of arbutin can easily be settled by means of the test tube. Arbutin often is alone sufficient to overcome urinary incontinence, but by no means always is the indicated remedy. Often Johnnie will stop wetting the bed if he gets a few minute doses of atropine. Also, it may save the boy's grandfather the humiliation of having to dodge into every alley passed when he goes down the street; although the old gentleman very likely requires *thuja* or *thujoid* with it, or alone, and perhaps *verbascum*; it even may be that he needs *rhusoid*. Anyway, both of them can be cured, a good work done, and legitimate boosting earned. For, the old man will tell it, nor will Johnnie's mother forget it. If, however, there is tenesmus, urine is scant, desire to urinate is frequent and dribbling present, with a weakened vesical sphincter,

especially in a chronic cystitis, often *cantharidin* will almost immediately relieve if given in minute doses, 1-5000 grain or less, frequently repeated. This remedy seems to be especially valuable in many cases of cystitis of gonorrheal origin.

In incontinence, get as much information as possible from the urine examination as well as from physical examination, not omitting the cystoscope when practicable. Then use the "rationally" indicated remedy; but, never forget that there is much further help to be obtained from many drugs used on account of their "specific" action in certain symptom-groupings. The writer ventures to say that no man who carefully tries out the latter will ever discontinue their use, and that his satisfaction will be such that he will continue to study the ever enlarging utility of drugs. The progress in the internist's work may not be as much heralded and as spectacular as that of the surgeon, but his field is boundless.

Those Five Neglected Hepatic Remedies.—Speaking of the specific symptomology, the writer wishes especially to commend to readers of CLINICAL MEDICINE Doctor Ellingwood's article in the January number. The table of the comparative action of the five remedies he treats of could with advantage be framed and studied daily by all those who believe that all cholagoges act alike and that calomel nearly completes the list, at times possibly reinforced with a little *podophyllin*. Ere long such a doctor will carry in his mind the vivid clinical picture of the indications for these five important vegetable hepatic remedies. Were it possible to assert that one remedy had more importance than the others, where they do not meet the same indications, the writer would say that *chionanthus* is the leader of them all; but it would be far better to say that it is the least replaceable and the one with the easiest symptomology. Let anyone skeptical as to the use of drugs according to the specific symptoms think of *chionanthus* first every time he sees a "yellow" patient. Most likely it will be the indicated remedy, and the results will be obtained from the drug or its concentrate, *chionanthoid*.

The Finger of God.—Thus has opium been called, and such it is when properly used; but it may be, also, and many times has been, the entire hand of the devil. Now, that we have the Harrison law in active operation, may the last-named function be denied the sap from the capsule of *papaver somniferum* as much as it is possible for legislation to aid in the accomplishment of this desirable end. Just where the devil has his habitation the

writer leaves to those better versed in dogma than is he. However, if his ever is a "strange face" in that locality pictured by Dante, alluded to by Milton, by many believed to be of immense heat, but in Scandinavian mythology typified as the very reverse—because cold was their economic and physical enemy—no one can greet that strange face with "Hello, doc! you hurried me here by the dope-route." That is, if there can be truth in the realm of the father of lies. Nevertheless, many have been ruined by the abuse of opium and its alkaloids, as well as by other potent drugs.

While not, in the writer's estimation, the main offenders against the moral law, upon which the numbered and enacted statute is or should be based, some of the profession have contributed to the crop of "fiends" so plentifully ripened in this country. Some practitioners have given opium preparations merely because they were narcotics, just because they would relieve pain, and in so doing have, for the most part unintentionally, aided the frightful evil of self-medication. "I shall have to give you a little morphine to ease you." Too often that has been the expression that has caused the patient to go and get a little of the drug, to relieve the pain on his own hook. "Why give a doctor a dollar to give a dose of morphine, when it is the only thing he can give to relieve me, anyway?" Thus has been formed the nucleus of a drug-habit. No use to deny this, for it is true.

Can any man give a stronger reason against freak legislation that would force the physician always to give his patient the name and quantity of the drug administered? However, the physician who realized the danger of the improper use of so potent a double-edged tool as opium or its products usually has used the drug as a narcotic *per se*, only to give temporary relief in trauma or if dealing with neoplasms or other conditions advanced beyond hope of cure. Outside of this, the legitimate use has been where "specific indication" existed. I include employment as aid to anesthesia, in full or part, in the latter.

Few physicians have been so shortsighted, the writer believes, as to give an injection of morphine merely to relieve pain, trusting to nature and luck to remove the cause while sensory functioning was, in whole or part, suspended. The writer believes that most practitioners have been taught that the relief of pain, without first ascertaining its cause, was at least inward and tacit admission of failure to solve the problem of the cause of the pressure, which, mechanically or

by toxemia engendered, directly or reflexly transmitted the danger-signal. If a train-crew found a red light by the track, it would be considered very poor practice simply to remove it and then proceed, without investigating. That would, indeed, be poor procedure. But, it is precisely the same kind of practice to relieve pain and disguise symptoms, without getting at the cause. When the physician gets busy with his little hypodermic, to relieve pain immediately so the patient will not send for the doctor around the corner in order to get quick relief, it verges upon professional cowardice; but it is to be hoped that this is seldom done in these days of scientific medicine and plenteous therapeutic resource.

While on the subject of the opium derivatives, it is impossible for the enthusiastic internist to pass by without saying that this is a wonderful group of remedies, deserving the most exhaustive study of what has already been accomplished and much further investigation. An understanding of the therapeutics of opium and of sulphate of morphine is something, but, as in other drugs having a number of active principles, the therapy of opium is an exhaustive study, and it must ever be remembered that the combination of an alkaloid with different radicles produces a vast difference in physiological action. The hydrobromide of morphine, in its action, is not the sulphate, by any means.

Examination of Urine.—Examination of urine is most properly becoming a routine measure with the modern physician. Even the limited laboratory facilities of the general practitioner often serve to secure data of immense importance in seemingly simple cases, and complete laboratory findings can be obtained at so little trouble and expense by sending specimens to a well-equipped laboratory that, when one fails to do so, he often works injustice to himself as well as to his patients.

The writer makes it a routine, whenever possible, at least to get the specific gravity and to ascertain the reaction and macroscopic appearance, going further if that seems necessary. Continued low specific gravity alone immediately will call our attention to metabolism out of physiological balance, to work undone by the kidneys and thrown upon other organ or organs, not intended for the function, in nature's effort at compensation. Often the balance will be restored by giving the indicated cholagog, and using such simple means as a course of arbutin and eapurpleoid.

It is not the intention here to emphasize the fact that many patients would be saved from becoming victims of some one of the manifold disorders grouped as "Bright's" if a timely examination of the urine had been made, with a proper interpretation of the findings. No life-insurance company will accept a risk without a urinary analysis, to be assured of the genuineness of apparent health, and it hardly seems rational for a physician to treat sick people without trying to get information from the same source. Diagnosis often is difficult when all means at hand are taken advantage of, and neglecting this routine will, sooner or later, cause the overlooking of something of importance. Quite recently a case of obstinate middle-ear trouble came under treatment. There was every reason to believe that most excellent local treatment had been given, but search for a cause for stubbornness in the healing-process, including examination of the urine, revealed the existence of diabetes.

Emetine in Pyorrhea.—A dentist recently, telling of his success with emetine in pyorrhea, laid great stress upon the fact that a solution of continuity of tissue of some kind must exist before the entamebas make themselves at home. The mistake of overenthusiasm must be avoided, and all lesions looked to, or an early return of the pyorrhea must be expected. Briefly, expecting all the evils of pyorrhea to be overcome by the single remedy and a lasting and beautiful set of teeth to result is about like expecting rhus tox. to cure rheumatism. Either remedy is precise in its results, and the indications for emetine are many; still, the man who expects a therapeutic agent to pass its limitations will soon make a failure and decry his tools.

Tulane Open to Women.—Announcement is made that Tulane University will now give medical education to both sexes. Why this was not done before is not clearly apparent to many. It does not seem that there ever has been sufficient reason to compel a daughter of the South to go far away for a medical education, should she desire one. The only objection I ever had to a woman doctor was, when, long years ago, a most worthy and lovable aunt took me to such a one. I preferred a man most emphatically. She was, of a truth, a dear old aunt, and that pioneer woman physician was a dear old lady, and, I am sure, a capable physician, too. However, the incident so impressed me that the memory of my boyish prejudice is one of the incidents of childhood, ineffaceably passing through the years. Often have I

thought that children of the opposite sex may have the same horror, at times, of going to a man. Unconsciously the sweet old lady acted a bit as a preceptor to a future physician, for her tact in handling that little boy patient has often been remembered when he was discharging the difficult task of putting some little girl patient at her ease.

A. L. NOURSE.

Sawyer ville, Ala.

INJECTION TREATMENT OF HEMORRHOIDS

CLINICAL MEDICINE, for April, just to hand. On page 352, "Injection Treatment of Hemorrhoids," you give a recipe for an injection fluid:

Carbolic-acid crystals.....	drs. 7
Glycerin.....	dr. 1
Cocaine hydrochloride.....	grs. 20

Do you *really* mean seven drams of carbolic acid *in one* dram of glycerin? Or, do you mean drs. 7 of phenol to oz. 1 of glycerin? In all the injection fluids I have ever seen, from 5 to 10 percent is the usual quantity recommended.

Albright, in his special work on rectal diseases, uses a 50-percent phenol and glycerin solution, but he has special suppositories prepared to control pain for the first twenty-four hours. I am wondering if a printer's error has not gotten into the prescription, and if some one should use this powerful remedy, if dire disaster is not likely to follow its use? For three years I have done considerable genitourinary and rectal work, but have never found it necessary so far to use such dangerous drugs. But I surely would like to know if the above prescription is *correct*, and if it has been used successfully?

J. H. COLLINS.

Peoria, Ill.

[The prescription formula as it stands is correct. The idea is to inject the hemorrhoids with straight carbolic acid, but, of course, sufficient glycerin has to be added to abstract the water of crystallization and make the acid liquid. There is no need to fear any dire disaster from this formula; only two or three drops are injected into the tumor. In fact, the stronger the carbolic acid, the safer the procedure becomes, for practically pure carbolic acid immediately and unfailingly coagulates the albumin of the tissues, so that there is no absorption and the hemorrhoid itself quickly sloughs off. We have

another paper on this topic, from another good doctor, and this will appear next month. —Ed.]

ANENT THE PATENT-MEDICINE PEDDLERS

There is now pending in the Illinois legislature a bill which should have the approval and endorsement of every doctor in this state. This bill forbids the indiscriminate distribution of samples of dangerous drugs to the laity, and will prevent the throwing of these samples into people's yards and hallways, and giving them to school children. It will also prohibit the sale of powerful medicinal agents in patent-medicine form by traveling wagon-men or peddlers.

The druggists of Illinois are behind this bill, and it should also be endorsed by the medical profession. If you live in Illinois, and approve of this bill (as you should), let us suggest that you make your wishes known to your representatives in the legislature. Urge its passage.

IMMUNITY IN DIPHTHERIA

An article on diphtheria in a recent number of *CLINICAL MEDICINE*, has stirred me up to send you the results of certain observations of mine during the last ten years or so. My conclusions are that diphtheria is not particularly contagious during the first stage. Also, that after the administration of antitoxin, the child who receives it is no longer a menace to other children, even if cultures in the throat are positive. This may not hold if the progress of the disease is not checked by the antitoxin, but I am positive it holds in general. So convinced am I of its truth that I no longer give preventive doses of antitoxin to other children in the patient's family, and I have never seen a second case develop if the first was taken in time. This conclusion, if true, would mean considerable in the matter of quarantine, and should be tested out thoroughly, so I am passing it on to be tried out by our friends of the "family."

During the last few years my practice has given me quite a number of cases of diphtheria among the Portuguese, among whom large families are the rule and isolation impossible. Under these conditions, it seems to me the theory has had ample opportunity for testing, but of course one man's conclusions are insufficient.

I am, of course, familiar with the Schick test; but, to my mind, the theory of personal

immunity is entirely insufficient to account for the results I have observed. In all probability, I have treated, in my practice, since I began my observations, one hundred or more cases. I have always given antitoxin to every suspicious case at once, and obtained the state report on the case later, sending the tube for culture on the day that the antitoxin was administered. Although in practically every case other children were exposed to the infection before the antitoxin was given, and in most of the cases were in communication with the patient afterwards, I have never seen a second case develop, except in a very few instances where both could be traced to the same carrier, who had the disease in a mild form.

As I served in the Boston City Hospital before the advent of antitoxin, and know how the disease went through whole families, I think I am in position to appreciate the difference.

The great point, in my estimation, is to treat the cases early. At the early period it is certainly not impossible that the bacilli may not have arrived at that point of development where they are likely to pass from the patient to another, and if the antitoxin is then given, the possibility of such communication is prevented. The antitoxin certainly prevents infection to a large extent. Whether it is absolute, as I suspect, or whether I have had an unusual series of cases, is, of course, for many observers to determine. Just try it out. Give no immunizing doses to other children in the family, and see if I am not right. With a mortality of nothing, in nearly every case treated with antitoxin, you are taking no particular risk, and it would mean a great deal if the case be proven. On the same theory, antitoxin given to carriers would render them immune to others.

L. C. JONES.

Falmouth, Mass.

[Our correspondent argues a good case, and far be it from us to deny that there may be a good deal in his position. It must be borne in mind, however, that the Schick test, concerning which there are three capital articles in the *Journal of the American Medical Association* of April 10, has shown that about 65 percent of persons are naturally immune from diphtheria anyway, or, to state it the other way around, only about 35 percent are susceptible to it, i. e., about one-third. This would doubtless account for the primary case or cases that occur in ordinary families; that is to say, in most families the person or per-

sons who are primarily attacked represent the 35 percent of susceptible individuals in that family.

We do not care to take the responsibility of recommending our readers to try Doctor Jones's proposition out, by withholding protective inoculation. But, inasmuch as he is carrying out this policy anyway, there is a very simple method by which he can confirm his own theory, namely, by subjecting all his exposed persons to the Schick test. If they show a fairly equal proportion of reactions and non-reactions to the test, and yet display, alike, immunity to attack under his policy of withholding inoculation, then, after a sufficient number of observations have been made in this way, his theory would be strengthened almost to the point of demonstration. Meanwhile, keep on using diphtheria antitoxin whenever susceptible persons are exposed to this disease.—ED.]

COMMENTS ON OUR MARCH EDITORIALS

The editorial, "Doers and Ditchers," is fine, but there is a reason for not accepting all the work of the doers. There are so many doers that do injurious things. If the ditchers had only the benevolent and useful doers to contend with, all would be well; but, to accept all the schemes brought forward would be disastrous. Yes, the ditcher has important uses, and a great many heads need whacking that have never been struck.

"Narcotic Legislation." This, like other classes of legislation, is imperfect, but possibly will result in good. At present the "fiends" are a troublesome lot. They are, as a rule, "colossal liars," and will get the doctor into trouble if he yields to their morbid appetite. Say *No* when asked for narcotics, and stick to it.

This brings us to the editorial on "The Educative Value of Pain," on which I advise as follows: Find the cause of pain (if you can) before you prescribe for it. Do not narcotize a patient with lockedup, loaded bowels, or with loaded bladder, or congested lungs or kidneys. Let narcotics come in only when needed. If labor-pains are causing unnecessary pain, relieve them, but, if you are not careful, you will prolong the labor and the pain, too, by the use of narcotics.

Say! Mr. Editor, why do you worry so much about the old doctor? We have several of these here in town and throughout the country, and they do not seem to worry

over the success of the younger generation. We have one or two younger men forging to the front, but not because of superior skill or laboratory knowledge, but this because of superiority, energy, and effort. They hustle. If you could hear them in our society meetings, you could not possibly attribute their success to superior ability or anything new they know that the older generation has not learned. Don't worry about the "old man." He is all right. If you desire to aid any one, preach conservatism to the young men.

Now, a word or two more in regard to "Doers and Ditchers." It is the plunger, such as Friedmann, that brings reproach upon the profession. That fellow borrowed a suggestion from me and set the world on fire, so to speak, with his turtle-serum fake. I wrote a burlesque, in the '90s, on "Frog and Turtle Serum," and said that the turtle was a combination of all kinds of flesh, and that turtle serum would cure all manner of disease. I also said that there was a Doctor Rush on Brewers Lake, this country, who was manufacturing turtle and frog serum, and that the latter was a sure cure for "lost manhood." Friedmann, seeing the article in *The J. A. M. A.*, began to do something, and your readers know the result. I tried to ditch them early in the action, saying that I should prosecute anyone who borrowed my thunder, but he could not be ditched. He was a persistent doer! And were it not for the persistent ditcher, the whole thing would go to the demnition bowwows.

W. P. HOWLE.

Charleston, Mo.

THERAPEUTIC SHORTCUTS

I always had my doubts as to whether anything I had said through the medical journals had been of any advantage to anyone, until last summer, when I was touring the West and Northwest, where I ran upon a doctor near Portland, Oregon, who had read a little medical article of mine, stating how I had cured all my cases of ivy poisoning. As soon as he learned who I was, he called my attention to the article and said it had been just the thing for him, as he was stationed at a lumber-camp where such cases were common. I asked him what success he had had with it, and he replied that it did the work every time and in short order.

As some readers of this may not have seen the former article, I will state here how I do it. A saturated solution of sodium salicylate and fluid hydrastis in water, applied

locally, will cure speedily, pleasantly, and cheaply.

Skin cancers or skin sores of practically all kinds will heal up and get well in short order when mopped frequently with tincture of iodine and then covered with sodium salicylate. Clean the sore, then make the application daily till it heals; the length of time required to cure such sore depends on the size and extent of tissue involved.

Mop out old chronic sore throats with tincture of iodine, and you will be surprised how speedily they will get well. This treatment does not cause pain or discomfort of any kind. It will hurt less and do more good than all the silver preparations ever invented.

I give my gonorrhea patients an elixir of saw palmetto berries, sandalwood and corn-silk, and wash out the urethra with a solution of sodium salicylate and fluid hydrastis in water, and they soon get well. Yes, I mean, well. And this does not cause pain. I make it a point to use such treatment in all kinds of cases, and it will not cause pain.

M. E. JOHNSON.

Pittsburg, Kans.

DOCTOR, ANOTHER SIDE—THINK IT OVER

It was midnight, the fast express due in Chicago at 3 a. m. plunged through the inky darkness with a muffled rumble and spitting huge clouds of red cinders. The two seats in front of me were occupied by four men. Two I judged by their conversation and their luggage were traveling salesmen. The third, a young man of possibly thirty, slender in build and with the face of a thinker, I found later was a contractor. The last one of the quartette, a quiet, dignified-looking gentleman rounding out the half-century mark, with black hair, gray temporals and closely cropped mustache, presented the mien of a successful business man.

I was leaning back in my seat, drowsily drumming my fingers on the car-window, when my ear caught the words "sterilization of degenerates." Being a physician, I naturally was interested and, so, followed closely the drift of the conversation.

"I'll tell you," said one of the salesmen, "I firmly believe that, if every man who committed rape should be castrated, it would be a mighty wholesome example for other beasts of the same species, and besides would stop the breeding of such animals. A man, be he ever so dense and depraved, is mighty par-

ticular to retain in good shape that anatomical aspect as long as possible."

"I do not believe it would be best or necessary to castrate so far as limiting the reproduction of defectives is concerned," spoke up the young contractor. "From what I can learn and from what physician friends tell me, I think the best thing to do is, to cut the spermatic cords. That operation has been done many times in the last few years, and of course that makes it impossible for the one operated upon to impregnate anyone. That I believe would be a great step forward. It would each year do away with millions of defectives of all classes that now are populating our prisons, hospitals, and homes for the feeble-minded. The philosophy of the survival of the fittest is all right; but, as Nietzsche says, the will to live is the *vis a tergo*, and I believe this desire is about as strong in one class as another. If left to themselves, it would be several milleniums before the unfit would run themselves out. I'm for the scientific shortcut."

"Gentlemen," said the man with the gray temples, who had been listening attentively, "you do not know me, of course, probably never saw me before, and may never again; but that doesn't matter. I want to give you a fragment of personal experience. This idea of sterilization may be just, and it may not. If laws were passed and enforced, compelling people to submit to surgery, even if it be the so-called defectives, for the purpose of rendering them sterile, I am afraid the state would be assuming a very grave responsibility."

There was a slight pause; then he continued:

"Besides, it is getting dangerously close to becoming a fad just now to remove a woman's ovaries every time she has a pain in those regions. The ovaries, I think, exert about the same influence in females as do the testicles in the male. *This I know*, from very bitter experience. *When these parts are taken from a woman, the real woman goes with them.*"

The man sat for a few minutes gazing through the car-window into the darkness. An expression of utter hopelessness flickered over his face and was reflected, it seemed to me, in the faces of his companions. I felt a quick sympathy going out to him and knew instinctively that here was a man who had built great castles, built them high, only to see them crumble and fall in ruins about him.

"Well," he said at last, "I must tell you. I have run my race, but you, gentlemen, I judge, have not; and what I am going to tell

you now may, at some time, be of service to you.

"I married the best, the only little woman in all the world—so, at least, it seemed to me. We married rather late in life, some would say. She was thirty-five and I was forty. Our home life was all that one could wish. We were sweethearts, husband and wife, pals, and partners in business. I made good money and my wife was a genius of efficiency. On leaving my office of an evening, I always took the first straight-across-town car for home, sure of a haven of rest from the cares of the day and of a cheerful greeting and a big hug from my wife. We had spun many plans for the future—a house full of lively boys and girls; and, of course, they would get a fine education. Each was to have a special corner in the big home we were to build—a country home with plenty of big, broad, cool porches and great warm fireplaces, and green velvet lawns threaded with gravel walks and driveways, and all that. In short, we had planned ever so many things for our big family that was to be.

"Then, one day, I went home as usual—but no wife greeted me at the door. I felt a great, terrible tug inside of me. An awful fear gripped me and I could hardly muster courage to enter the house. Instinctively I felt that some awful catastrophe was about to overtake us. Hastening to my wife's room, I found her lying on the big divan, all drawn up, her knees almost under her chin, face pinched and blue. Taking hold of her hands, I found them cold and clammy.

"'What on earth!' I managed to exclaim.

"'I don't know, Bob,' she answered, with a feeble effort at a smile. 'I-am in dreadful pain and I believe you will have to call a physician.'

"I rushed to the 'phone and called a doctor whom I knew by reputation. He was there in a few minutes, asked her many questions, examined her, and finally declared that she must be taken to the hospital at once.

"'Doctor, what is the cause of all this pain and what must you do?' I asked, and he replied that it might be one of several things—the appendix, an ovary or perhaps pregnancy that had taken place abnormally.

"I was all at sea. My wife had always been the picture of health, never had an ache or a pain. I only could tell the doctor to go ahead and do for her what he should. All night I hovered about my wife's room in the hospital. Nurses, dozens of them, came and went, but said nothing to me. Doctors, young and old, passed in the halls, talking in

an undertone as they melted from sight into the labyrinth of rooms. Elevators constantly and noiselessly glided up and down. In the room to my right a woman moaned a low never-ending moan; a little farther down the hall a man cried and begged for relief from pain. 'I wish the doctor would hurry and see my patient; he needs a hypo,' I heard a passing nurse say. Across the hall a little baby whimpered. From other rooms came expressions of agony.

"Gentlemen, if you have never been in a hospital with sick there of your own, you cannot imagine the strain upon your nerves. But this is forced upon your attention: The whole human machinery is absolutely indifferent to your suffering. It is a giant money-making mechanism. If these institutions existed for the care of the sick of their own personnel only, you would see an entirely different state of affairs.

"Well, presently my doctor came to me and said that it would be necessary to make an exploratory operation, to determine what was the matter. He said that rest in bed and the ice-bag had done no good, and, consequently, nothing but surgery was left.

"'Do you think she will die, doctor?' I asked.

"'I think not,' he replied, 'but, of course, there always is some element of risk involved.' I could say no more. I was dumb with fear.

"Two nurses came in, lifted my wife upon one of those rubber-wheeled carriers, rolled her to a waiting elevator, motioned me to enter, and up we shot. At the very top, it seemed to me, we stopped. They pushed the cart with its precious load into the operating-room—all alone into the arena of death, I thought; but I could give her no aid.

"'You wait here,' said one of the nurses, 'and we will let you know how she gets along.' There was no more sympathy or human feeling in that woman's voice or looks than if they merely had run my automobile into that sinister room to look it over. Still, that particular brand of human nature we encounter all around and about us.

"Ages after my little wife had entered that operating-room a nurse hurried to me and said the doctor considered it best to remove the appendix and the right ovary, and should he go ahead?

"'For God's sake, tell him to do what is right, I only can depend upon him,' I told her.

"I waited and waited, every nerve ready to snap. It took so long, I expected every minute for the nurse to come again with some terrible news. Then, at last, they wheeled

her out again, moaning as I heard that other woman moan downstairs. She called for me over and over again, but was too near dead to recognize me. Soon a dreadful nausea and vomiting twisted her body from head to foot. I will not attempt to describe my feelings—I can not—I can not.

"Well, to make a long story short, the doctor told me that when he examined the ovaries the right one looked suspicious and he thought best to remove it. The appendix was not affected, but in an operation of that kind they always removed it, for fear of more trouble—also in the future. In three weeks I had my wife back home. She was gaining strength, and I had begun to feel encouraged; but, in six weeks to the day, pain set in in her left side. My physician said it was just one of those peculiar cases where the pain was about the only thing one could find, that he couldn't give the exact cause. Consultation was held, then once more to the hospital. 'Doctor,' I said, 'isn't there any way other than the knife? I have heard there are other lines of treatment.'

"Such treatment is not safe, it is experimental; those men are dreamers,' was the doctor's comment. That settled it. The terrible ordeal again. Back home; well, with the exception of vague pains. I never realized what it meant, even then. I knew we could not have children now, but I thought we could go on loving just the same. She would still be my inspiration—I her oracle. We could get a little one from the Home and live, after all.

"Well, I am going home tonight. I have been away for over a month. Can you, gentlemen, imagine my reception when I get there? I shall let myself in with my night-key, which I always carry now, hang my coat and hat on the hall-tree, walk into the room where she used to sit on my lap, arms around my neck, and build air-castles with me in the flickering flames of the fireplace. Yes, there is the very same chair, the same fireplace, but she, she will be in bed. She has grown quite stout—sixty pounds more; her clothes will be scattered here and there over the room, a basket with some half-eaten apples and peelings on the table, the curtains all drawn, and the room full of vague odors, a *Cosmopolitan Magazine* lying open, face down, on the floor by her bed. My step awakens her.

"Well, hello! how did you happen to get home so soon? Have a successful trip? Hurry now and get to bed, and don't make any noise, for I am sleepy and have had a

headache all day!" No greetings as of old; no warmth; no caresses; no joy at my return. You know what I mean, friends—all the little things that kindle ambition and make red blood course through your veins.

"The fire has burned to ashes, gentlemen. God knows I fought the realization of it; I was heart-broken, I was in the deepest pit of despair. I tried other women, but there was no satisfaction. Whisky numbed my pain for awhile, but I came out only to suffer more. Yes, her health is fair now. The doctor never told me what the trouble was. He says he doesn't think she will ever be troubled any more."

The whistle blew a shrill blast, and, with a hissing of steam and compressed air and the grinding of brakes, the train came to a standstill.

"Well, we have arrived," said the contractor.

"Yes, this is the end of the journey," he said wearily, as he hurried to the exit.

"Poor devil," said the salesman, as the other dropped from the train.

LEON E. WHETSELL.

Bloomington, Ind.

[Although told in story form, Doctor Whetsell assures us that the incident related is absolutely true. Read this in connection with the letter by Mr. Eytinge on page 463.—Ed.]

DOCTOR BOWERS AND THE "PRINCE OF WEEDS"

Concerning the article by Doctor Bowers in March *CLINICAL MEDICINE*, I wish to say that, if the Doctor means it as a boost for the Prince of Weeds, he has done well; but, very badly, if he really intended to help us uproot this weed and turn it up to the sun, since it is evident that he is no reformer. It is significant that what he says in favor of tobacco he either vouches for or leaves undoubted; but, what he says against it, he accounts for by his frequent interpolation of "so they say." The fact is, that only the smokers are anxious either to write or print such articles without comment, and only the slaves of this prince are ever rushing to defend this slavery either by honest effort or ridicule.

Doctor Bowers says: "Whether we are greatly to be injured or mildly benefited depends upon who is boss." Now, doctor, is there really any doubt as to who will be boss in most cases, or, moreover, to quote you

again, as to who "holds the whiphand"? Again he says: "If it helps, it is like anything else that is helpful, worth all it costs."

A good deal hangs on this "if." If a thing that "helps" helps others by example to a habit they can ill afford—helps small boys to degradation—is it "worth all it costs"?

It is a false and dangerous philosophy that says that anything that helps is worth all it costs; and certainly no argument that tobacco helps anyone can be substantiated in the ultimate, at least no one not using it ever misses it or needs this kind of "help." It is safe to assert that tobacco has no therapeutic properties that are not better supplanted and supplied by other agencies that have no "string" attached to them.

As to the benefits of smoking, all smokes are an evil and a nuisance, and we are as much justified in getting rid of tobacco-smoke as of a whole lot of other smokes we are making a hue and cry over.

A. P. REED.

Dorchester, Mass.

THE PLAGUE OF LICE

In an article in *CLINICAL MEDICINE*, Professor Lowry complains of the plague of lice in the army. Professor, you should say graybacks; and the only way to keep away from them is, to stay at home. You ask for experience. Here you get it.

During our late "uncivil" war, we did not stop for such small bugs—they thrived on the corporal and the general, no less than on the private. My captain, one of the fighting McCooks, had some experience with the graybacks. He told us to hang our dog-hair blankets in the sun every clear day. In my mess of 12 we kept clean and neat. Before Christmas, our company was sent up the Ohio River, to load rocks for the levee in front of Fort Defiance, near Cairo, Illinois. We had a fine time, nice weather, and were in no danger in the grand old state of Illinois.

One day I had been out hunting, and on my return some of the boys in the mess accused me of being dirty, filthy, and lousy. Of course, there was a show of fight at once. One of the boys bet me a dollar. I put up. I lost. I was all that they accused me of. Then what a laugh! We caught the captain and lieutenants all in the same boat; in fact, the whole company. Returning to Cairo, we went into winter-sheds, and then we did have a time. We got our "seed" on the steamer Rob Roy, used as a ferry boat and for making short trips. February 6 we were in

Fort Henry, Tennessee. On the 16th, we entered Fort Donelson and lived in the log huts used by the "Johnnies." Then we had a mixed breed. Soon my company was sent to Clarksville, Tennessee. I had a room in the court-house for my quarters.

One wet day some of the boys wanted a social game of cards in my room. It was not long until one of the boys called out, "Lice." I locked the door and began a search. A low-down playoff brought his blanket into my room. It could nearly walk. Arriving at Shiloh, this man and two others were so dirty, no one would allow them in their tents. I was detailed to clean them up. I called for new uniforms and blankets for them. I also got a large kettle and three pounds of soap. With the aid of help, they had a haircut, then they were plunged into the river and scrubbed clean. That lesson was enough for nearly two years for two of them. We scrubbed them in winter outdoors, and a shake of my head and telling them to clean up was enough. The other fellow needed no other lesson, except to be told, "If you want to stay in my mess, clean up." He still thanks me for making him a clean man.

Soldiers are not furnished looking-glasses or bath-towels; in fact, Father Abe could not furnish clothes at times. Let the Professor pull off his clothes and skirmish, boil them and pull them on to dry. I have seen the generals skirmishing. No doubt, while in camp the soldiers can keep clean in time of peace. The old "unniguintum" was our great standby; close-cropped hair and a fine comb ("Jerusalem overtaker") kept my head clean.

Measles, meningitis, and lice will follow any army. A soldier cannot have a clean shirt every day, because he may own but one. The hospital-bedding can be cleaned by the steam sterilizers. O, well, what a little thing for the Professor to complain of. Over here, the boys in gray shot at you, and hit, also.

T. C. MURPHY.

Pass Christian, Miss.

CURING NARCOTIC ADDICTIONS: A CRITICISM

In the April issue of *CLINICAL MEDICINE*, I read with interest an article, "Drug Habits and How to Treat Them," by Dr. William F. Waugh. After years of experience, I am of a different opinion from Doctor Waugh in regard to treatment and its after-effects on people who for years have been addicted to the use of narcotics. My relations with this

class of unfortunates lead me to the belief that by an exercise of will power, either as the result of a "hunch" or shock of some kind, alcoholics are able to stop the habit; but I never have seen or heard of a narcotic addict who was able to secure permanent relief without proper medical assistance.

I have known hundreds of people who have reduced from a large daily dosage of the narcotic to a fraction of a grain, and eventually have stopped temporarily the use of it entirely. This is not a permanent result, however, since eventually the craving drives these people back to the habit. Successful treatment of drug addiction does not consist in merely separating the user from the drug itself, which any one can do under the influence of scopolamine or hyoscine with some alkaloid of morphine, together with proper elimination; but it must include that essential thing, which makes the treatment effective and insures permanent results, *the obliteration of the craving*. Withdrawal alone does not do this; suitable corrective medication is a necessity.

Neither do I believe in the statement that the general practitioner can treat these addictions successfully. There are two conditions which are absolutely essential for success in the management of these patients. One is suitable medication; the other, practically as important, is the control of the patient. Physicians who specialize in any department of medicine secure better results therein than the general practitioner. I feel that great injustice is done to a man who is a victim of the drug habit, when he presents himself to his family physician and confides in him, if the general practitioner tries to treat the case, instead of referring him to some one who is specializing in that department of medicine, and who devotes all his time to its study.

I find that the treatment of drug addiction is one of great responsibility and demands mature professional judgment and constant attention in order to conduct the case successfully through the various phases of the treatment until the stage of convalescence is reached, to establish which, in our experience, requires from four to six weeks, at the end of which time the man is approximately restored to his normal condition, providing he is not neurotic or syphilitic, and has to contend only with drug influences.

That any individual may have given a certain treatment several thousand times, does not prove that the treatment is scientific or dependable. To demonstrate the value of a

cure, many hundreds of cases must be treated and an unprejudiced follow-up system installed to ascertain the permanency of the results observed. Moreover, the safety of the system must be demonstrated. Any treatment that is attended with increased mortality, above a certain number of grains of drug in any given addiction, is dangerous and its usefulness doubtful.

The Lambert-Towns treatment is specifically correct for the treatment of drug addiction; is adaptable, under mature professional judgment, to every type of case; is certain in its results if the specified therapeutic results are obtained as the case progresses; and carries no probability of demise or dementia among persons treated.

To the professional man who wants definite results in the treatment of drug addiction, with but slight discomfort, the Lambert-Towns method offers the surest way to secure these results, with less possibility of complication or failure than any other known treatment.

WM. K. MC LAUGHLIN.

2715 S. Michigan Ave., Chicago, Ill.

[We agree with Dr. McLaughlin that it pays to place these morphine addicts in special institutions whenever possible. In the long run money will be saved by the patient, who is also much more likely to be cured when under close expert supervision.—Ed.]

SUPPORT THESE BILLS

The Chicago Medical Society has endorsed two important bills now pending in the Illinois State Legislature, namely House Bill 213, providing a more efficient means of registering births and deaths, and House Bill 477, which makes it possible for the State Board of Health to exert its authority over physicians licensed prior to 1899.

Relative to the necessity for the last bill, the present condition is clearly expressed in the resolutions passed by the Council of the Chicago Medical Society, in the statement that "a physician licensed before July 1, 1899, may deceive and defraud the public, may commit any crime, may even be sent to the penitentiary, and yet remain a licensed physician." This is a condition which should clearly be corrected, and will be corrected if House Bill No. 477 becomes a law.

We earnestly advise every Illinois physician to lend his active support to the passage of these two bills. Write to your senators and representatives in the state legislature.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

THE criteria by which Sokolowski attempts to demarcate tubercular pseudochlorosis from chlorosis fail in the cases in which they are most needed. In hysterics, there often occur a so-called nervous cough, a rise of temperature, and even hemoptys's. Of course, the tubercle bacillus is pathognomonic evidence.

Consequently the treatment of chlorosis cannot be confined to the ordinary restorative therapy. The conditions of maldevelopment require something more than iron or manganese for their stimulation. The great results obtained by opotherapy in conditions of maldevelopment, generally, and in arrested development through removal of physiologic organs would indicate its employment here. The imperfect metabolism aggravated by hepatic and renal inadequacy would indicate the use of alteratives rather than of simple restoratives.

Sir Andrew Clark made an attempt to reach this element by the following procedure: "On first waking in the morning, sip a quarter of a pint of cold water. On rising take a tepid sponge-bath, dry quickly and follow with a brisk toweling. Clothe warmly and loosely; see that there is no constriction of the body or of the limbs. Have four simple but liberal meals daily, arranged after this fashion: Breakfast—8 to 9 a. m.—whole-meal bread and butter, with one or two eggs or some broiled fresh fish or the wing of a cold chicken or pheasant, and, toward the close of the meal, half a pint of equal parts of milk and tea not infused longer than five minutes. Lunch or dinner—1 to 2 p. m.—fresh tenderly dressed meat, bread, potato, well-boiled green vegetables, and any sort of simple farinaceous pudding or cooked fruit, preferably apple; drink one glass of Burgundy alone or in half a tumblerful of water. Tea—4 to 5 p. m.—whole-meal bread and butter, with a cup of equal parts of tea and milk. Dinner or supper—7 to 8 p. m.—should resemble the mid-day meal, but should be less in quantity. Nothing is to be taken after this meal, nothing between meals, and nothing but what there is

set down. Walk at least half an hour twice daily, and as much more as strength and convenience will permit. Retire to bed about 10 p. m., and repeat the sponging and toweling. See that the bedroom is cool and well ventilated. Lead a simple, regular, active, occupied, purposive life; and do not notice or distrust yourself."

Both medicine and psychotherapy are aided and explained by the science of physiology, which shows that any force, whether of mind or matter, when it enters the body always encounters more or less resistance, and, when its strength is superior, overcomes that resistance. The part thus influenced by the incoming force tends to remain in the state to which it has been forced; which will be one of decreased resistance, so that the line along which the force acts will oppose a weakened power to any similarly acting force that may be brought against it. Thus, in time a habit is established. The act which at first we perform only with effort and consciously we at length, by aid of repetition, perform mechanically, with little or no effort.

It is the same with a thought. The thought which sends a smile to the face sends it there a little more easily each time we smile, and it travels along a line of its own, a different one from that pursued by the thought that brings a frown—which of course also will appear more and more easily as its line of resistance is weakened by thought-repetition. Both the physician and the psychotherapist know this, and the inferences to be drawn are obvious to both. Each thought, good or bad, healthy or injurious, that enters the mind, if persisted in, has its direction of march through the body marked out for it, and it will pursue it as infallibly as heated air rises and cold air falls.

In medicine, the principle of *selective drug-action* shows how a given drug, on its way through the human body in the blood circulation, passes by a hundred stopping-places

unhesitatingly, hurrying on its way to carry succor to the one organ or part that needs it and for which the physician has intended it; and in psychotherapy we know that a thought acts in a similar manner. In fact, the drug-action illustrates the method of the thought-action.

Always the method of the invisible is declared by the method of the visible to those who have the eyes to see. Moreover, the means by which the psychotherapist learns what thought or thoughts to administer in a given case, are so much like the means employed by the physician in finding his drug indicated that really there is no difference between them except in mere form, and often not even in that. In a surprising number of cases they are identical. As the physician takes the patient's pulse and asks questions, or sees without asking what he wishes to know, and thus finds the right drug indicated, so the psychotherapist asks his patient questions or sees for himself what he wishes to know without asking anything, and in this manner takes the patient's mental pulse and finds what correction of thought is indicated.

Medicine and psychotherapy, in short, are blood brothers, not enemies. At their best, they both of them have the same origin and the same aim, growing out of the desire of the best people in the world to bring into it all they may of health and happiness; and even the methods of the two differ from each other in a much smaller degree than is commonly supposed. While for years to come there will, perhaps, be healers and physicians between whom there will be unending strife, the not distant future will surely see the union of these two great professions at the top, and the best doctor will be he who is most skilful in the application, not merely of medicine, but of the principles of psychotherapy as well.

As to the etiology of arteriosclerosis, Herz affirms that the main point which he emphasizes is, the importance of grief and worry in the origin of this condition, and the necessity of the physician's being a true friend of the family and adviser in order to better conditions in this respect.

Herz is right. Far too little attention is being paid, as a rule, to the nervous or psychic factors contributing to arteriosclerosis. And not only in this condition but in every other should we practice more psychotherapy. Physicians are prone to scoff at the idea that one can die of a broken heart; still, humanity at large and many general practitioners know

that this does occur. Herz tells of a case of this kind in his practice. A woman whom he knew to be perfectly healthy was actually consumed by grief and died of coronary sclerosis when her daughter went wrong. Women die of grief; men, from worry over business. The effect of emotions on the vascular system is most serious when the vessels involved are connected with the brain, heart or kidneys.

The physician who does not apply psychotherapy in the treatment of arteriosclerosis neglects one of the most effectual means at his command. In cerebral-neurasthenic arteriosclerosis, iodine is the main reliance, and no better preparation can be given than calcidin. In coronary trouble, theobromine and the nitrites are indicated. Yet, all these are of little, if any, value when the arteriosclerosis affects the cardiorenal vessels. Dieting is the reliance here. Even if alcohol and tobacco are factors in the vascular trouble, any benefit from dropping them entirely may be far outbalanced by the patient's longing for his accustomed stimulant. Everything should be done to make such a patient placid, comfortable, and cheery. An alcohol rub in the morning before rising is an important aid. If he dreads balneotherapy, do not insist upon it or on anything that will annoy or distress him.

Of course, the prophylaxis of arteriosclerosis should begin in childhood. Children generally are driven, as being naturally lazy and ambitionless, but this is a mistake. Most people, even children, try to do too much; they work and worry too much. Children should be trained to recognize that they owe a duty to themselves, to seek fun as a recompense for fulfilling their ordinary duties. Joy does not come to us as does sorrow; we have to seek for it, and we understand this. Most men are slaves to duty—they overwork and ruin themselves. We must do our very best to relieve or to cure our patients, and also to take advantage of our opportunities to teach them how to live. We should try to reach the mind and soul of each patient, and impress upon all our earnest desire to cure them and to keep them well after they leave our hands.

A natural question to ask is, How are we to determine the true position of a case of supernormal pressure? These cases always give us anxiety, and rightly so, for we are confronted by two dangers, and with one eye we see visions of a possible catastrophe through the rupture of a weak vessel by doing too little, while with the other we see the

danger of doing too much in lowering the pressure and weakening the circulatory force.

Our first duty is, to take a careful history of the case, and to observe the condition of the cardiovascular, the renal, and the alimentary systems; then to try to find out the cause of the high pressure, which may be errors in diet, alcohol, syphilis, lead, and, as I have just stated, excessive worry—remembering that supernormal pressure is not a disease in itself, but a symptom only.

If the left ventricle is hypertrophied, it suggests that the pressure has been persistently high for months or years. Experience teaches us that, with a restriction of red meats and alcoholic drinks in the dietary of those who take them freely, the pressure, if not a permanently high one, usually diminishes; and this argues that purin bodies and alcohol probably act as vasoconstrictors. Waste is constantly going on in the body, and it is important to get rid of the products of waste, whatever they may be. The proof of the splanchnic vessels being some of the earliest to become affected by arteriosclerosis points to our relieving congestion of the visceral vessels; and this can be done by judicious purgation, and 1-grain doses of calomel followed by a saline laxative two or three times a week are most useful.

It is very important that we overcome acidemia and autotoxemia, and this can be done best by sodoxilin and compound creosote or the sulphocarbolates. One of the greatest outlets for waste products is the skin, and when this is inactive free action of this organ must be encouraged; and this is best accomplished by mud baths, epsom-salt baths, Nauheim baths, and by massage and moderate exercise. Intestinal lavation also is very desirable where there is constipation. It is a common observation that with dilated peripheral vessels, causing an active skin, we get a lower range of blood pressure; a fact which should lead us to suggest to those who can afford it to follow the sun.

The cardinal principles of treatment, then, resolve themselves into a strict regulation of the intake, the active outlet for the waste products, and moderate exercise followed by rest; the latter being very desirable for giving a better distribution of the blood. Still, sphygmomanometric observations must be made from time to time as a guidance in treatment.

If in spite of our regimen and treatment the pressure continues high, after having

watched the patient carefully for some time, we may safely conclude that this is a case in which the pressure is permanently supernormal. In any event, recommend the general regimen to be continued, and as long as no urgent symptoms arise the patient may do his work in life, provided he avoids excitement and sudden strain.

We must not use any very *active* means to reduce the pressure, remembering that it is probably an advantage and necessary that the pressure be high for the maintenance of an adequate supply of blood to vital organs. Autocondensation, however, may be cautiously given in selected cases. As for drugs of the vasodilator type (by this I mean the nitrite group), use them very little except in emergencies, for it is sounder treatment to get rid of the chemical bodies in the system which tend to contract the peripheral vessels by the means mentioned, rather than by dilating the blood-vessels, with the offending poisons still intact. In gouty subjects, iodides and colchicine may be given carefully; but, if there is any syphilitic history, they may be pushed.

In the case of the active, driving business man who has unconsciously damaged his machine, let him reduce the speed from the twenty-four knots of a Lusitania to the ten knots of the ocean tramp. It is interesting to note that the worry and apprehension associated with the first shock of the discovery that something is wrong may cause loss of weight, and with it reduction in the blood pressure. Osler reports a case as follows: "A man of sixty-two, whose first indication of trouble was an attack of transient aphasia, lost two stone in weight in a year, and his blood pressure sank, from 220, to 150. He has been better since he has taken a philosophic view of the situation, and his blood pressure has risen to 180."

Don't forget to lessen the intake. We all eat too much—"the platter kills more than the sword." By all means, caution your patients to cut down on the amount of food. Overeating undoubtedly is a possible factor in obscure forms of hypertension and arteriosclerosis in persons otherwise temperate. Largely a matter of habit, the amount of food taken should be enough to keep the engines going at a steady speed. A diet of low protein content is best, and fairly large quantities of liquid should be taken.

And let me remind you again that *elimination* should be promoted in every way by making the action of the kidneys, bowels, and skin thoroughly efficient.

Among the Books

MAY: "DISEASES OF THE EYE"

Manual of the Diseases of the Eye. By Charles H. May, M. D., Columbia University, New York. Eighth edition, revised. With 377 original illustrations, including 22 plates and 71 colored figures. New York: William Wood & Co. 1914. Price \$2.00.

Good wine needs no bush. A book which in fourteen years has reached seven editions has passed beyond the pale either of commendation or criticism by the reviewer, both in respect of the length of time it has stood the test and also in consideration of the experience acquired by the author in making revisions and improvements. Doctor May's book has become a sort of classic among the smaller works on the eye.

We rather surmise that the conciseness of this manual has contributed in no small degree to its popularity. The general practitioner does not want a voluminous, exhaustive treatise on the subject. Of all the specialties in medicine, ophthalmology is the one in which the general physician has the least desire to dabble as a pretended expert. What he wants is, a concise, practical, systematic manual, sufficiently comprehensive and up to date, yet, of limited size and range; and this is just what Doctor May has given him, hence, the wide and continued demand for the book. He has managed to crowd a surprising amount of meaty information into the 400 small pages; and it is particularly pleasing to find so many excellent colored illustrations in a volume of this limited size.

ABBOTT: "NARCOTIC RECORD BOOK"

Federal Narcotic Record Book. For Physicians, Dentists and Veterinarians. Published by The Abbott Laboratories, [The Abbott Alkaloidal Company], Ravenswood, Chicago. Price, cloth, 25 cents; in flexible seal-grain leather, 75 cents.

Under the recently enacted Federal Narcotic Law, known as the Harrison Act, every physician, dentist and veterinarian will be obliged to keep a formal record of nearly every quantity of the drugs affected by the

Act, namely, opium and coca and their derivatives, which he dispenses in his office or elsewhere. For this purpose he will need some convenient form of record book; for he cannot hope to keep any acceptable record on loose paper. The only way to simplify and clarify this task (which every practitioner *must* carry out), and at the same time to render it satisfactory to the inspector, is to have a suitable record book.

The Abbott Alkaloidal Company has prepared an excellent little book of the kind—precisely what the physician, veterinarian or dentist needs. It contains a synopsis of the law itself, a list of the drugs covered by it, a place for making the preliminary inventory (which is also required by the law), even the notary's form of affidavit ready to execute, clear, simple instructions for the use of the book, and some hundred pages of ruled record space, all neatly bound in cloth, and of such a size that it will easily go in your coat pocket, and at the nominal price of 25 cents, or 75 cents in a beautiful flexible-leather binding.

We positively don't see how any man in practice can get along without this book. It reduces the whole vexatious affair to a simple question of filling in a few headings in a memorandum book—all the rest of the work is done by the book itself. If you want to relieve yourself of anxiety and work, and insure accuracy in carrying out this record requirement, get one of these little books.

FISCHER: "DISEASES OF CHILDREN"

Diseases of Infancy and Childhood: Their Dietetic, Hygienic, and Medical Treatment. By Louis Fischer, M. D. Fifth edition. Philadelphia: The F. A. Davis Company. 1914.

Fischer's textbook continues to maintain its place in the front rank of the many published volumes devoted to pediatrics. This author writes, everywhere and all the time, for the general practitioner, and avoids unnecessary theorizing, in order that he may the more fully consider differential diagnosis and rational therapeutics. In the diagnosis of

diseases peculiar to early life, the biologic methods receive deserved attention, and this portion of the book probably will prove most valuable to the general practitioner. The author recognizes and points out that the undeveloped organism of the child, because of its physiologic peculiarities, reacts to the same pathologic factors very differently than the mature organism of the adult.

The book contains 43 halftone and color plates, besides a wealth of illustrations, which have been supplied wherever they seemed essential, or at least desirable, to a clear conception of the subject in hand. The young physician desiring a single volume on the diseases of children will find it a safe "bet" to procure Fischer's latest edition; and even the experienced pediatricist will find much of interest in the views of the author.

FAIRBAIRN: "MIDWIFERY"

A Text Book for Midwives. By John S. Fairbairn, M. A., B. M., B. Ch. (Oxon.), F. R. C. P. (Lond.), F. R. C. S. (Eng.), Obstetric Physician, St. Thomas' Hospital. London: Henry Frowde, Oxford University Press. 1914. Price \$3.75.

One of the principal difficulties in the way of an adequate understanding of the science and art of midwifery is a lack of knowledge of the elementary principles of physiology involved in the subject. Anatomy is more generally understood. Therefore, it is with great satisfaction that we observe the care and space devoted by the author of this book to the physiology of pregnancy and labor in its broadest intent.

It should be remembered that the book is intended, not for the medical man, but for the midwife, of whom there is no widely recognized counterpart in this country. However, so far as the actual subject of midwifery is concerned, the physician will find it sufficiently full and adequate for all his needs.

The volume is well and generously illustrated. The plates, in particular, are beautiful pieces of work, both from the didactic and from the artistic standpoint.

THOMSON: "CLINICAL MEDICINE"

A Treatise on Clinical Medicine. By William Hanna Thomson, M. D., LL. D. Philadelphia and London: The W. B. Saunders Company. 1914. Price \$5.00.

A treatise on clinical medicine, as the author points out in his preface, should chiefly consider those phases of the subject

which concern the physician in his treatment of the sick. Knowledge gained in laboratories and at necropsies should be preliminary to the approach to the case. It is the condition of the living patient which then demands exclusive attention.

This book, therefore, begins with the meaning of certain common but important symptoms. In each case, that meaning is neither vague nor uncertain, but rather calls for thorough understanding before going further into the details of the condition. A chapter then follows on the use of remedies and how they can be most conveniently classified according to their special applications. Then follows the section on micro-organic infections, with a classification of these agents. The last section deals with the diseases of particular organs and tissues.

The author's avowed aim, throughout the book, is, to serve and help the physician while he is actively engaged in the performance of his professional duties; and we are bound to say he has made his purpose good. It is an altogether unique and exceedingly helpful book.

NORRIS: "BLOOD PRESSURE"

Blood Pressure: Its Clinical Applications. By George William Norris, A. B., M. D. Illustrated with 98 engravings and 1 colored plate. Philadelphia and New York: Lea & Febiger. 1914.

Blood pressure is a subject which has been a good deal in the limelight in the last few years—chiefly, we suspect, because in this period we have been furnished with reasonably accurate devices for the measurement of this phenomenon, and, so, like children with a new toy, we naturally have sported it upon every available occasion, in season and out of season. Not that we would be thought to belittle the value of the blood pressure as a diagnostic factor; but we do very emphatically believe that its importance has been greatly overrated and misunderstood, and that, when all the returns are in, it will be found to fall into a rather modest place in the ranks, alongside other physical diagnostics.

For this reason, we cannot regard any book at present devoted to the subject as being final, or decisive, or even, in the teleological sense, reliable, but only as contributing to the ultimate resolution of the matter. From such a viewpoint, Doctor Norris's contribution is to be welcomed, as being properly tentative and moderate. We are glad to find this statement: "Hypertension, *per se*, is not an

indication for treatment, except along preventive lines, any more than is the presence of a heart murmur." That has been the trouble with the whole blood pressure propaganda—that it has set everybody to devising ways and means to reduce it, and thereby has done about as much harm as good. The whole subject, as stated, can hardly be said to have reached, as yet, a stage of definite evaluation.

DE NORMANDIE: "CASE HISTORIES IN OBSTETRICS"

Case Histories in Obstetrics. By Robert L. DeNormandie, A. B., M. D., Assistant in Obstetrics, Harvard Medical College. Boston: W. M. Leonard, Publisher. 1914. Price \$4.00.

Following the plan of other volumes of this series, prepared by teachers in the Harvard University Medical School, Doctor De-Normandie has produced a book on obstetrics in the form of case histories, similar in arrangement to Cabot's "Case Histories in Medicine" and Morse's "Case Histories in Pediatrics." I understand that this style of teaching originated in the suggestion of Doctor Cannon, who was then a brilliant student in the school of which he is now professor. (It is a pity, by the way, that Doctor Cannon's own subject hardly lends itself to this kind of teaching.) It is a very excellent method, and the books produced under it are extremely helpful and practical. They should be especially valuable to those who are teaching the various subjects.

This book teaches obstetrics as it should be taught, at the bedside of the patient. The practical value of such a book needs no argument. It is self-evident. We have but one criticism to make—the text might have been illuminated by the introduction of at least diagrammatic illustrations.

ROSE AND CARLESS: "SURGERY"

Rose and Carless' Manual of Surgery. Ninth Edition. Revised by Albert Carless, M. B., M. S., (Lond.), F. R. C. S., Surgeon to King's College Hospital, London. New York: William Wood & Co. 1914. Price \$5.00.

If I should meet on the street an old and tried mutual friend, well known to all of us, and I should say, "He is the same old So-and-So, only improved a little with age and experience," that would be sufficient to convey, to everybody who knew him all they wished to know about him. Well, here is just such

an old friend, dressed in a new suit, and carrying a flavor of ripened wisdom, such as every good man and every good thing acquires by age, but in the main, the same old friend.

"Rose and Carless" is now in its ninth edition, and has been in our midst almost twenty years. What can a superficial review of such a book signify? I must, however, make special mention of the excellent chapters on bacteriology, infection, immunity, and hematology, contributed by Doctor Emery of London. They are splendid contributions in themselves, and they indicate the way in which the book keeps step with the march of events.

PRITCHARD: "PRACTICAL PRESCRIBING"

Practical Prescribing, With Clinical Notes. By Arthur H. Pritchard, M. R. C. S., R. N. (Rtd.), late house physician, Brompton Hospital, London. London: Henry Frowde, Oxford University Press. 1913. Price \$2.00.

There is, in these days, we fear, an unfortunate tendency toward the teaching of the various branches of medicine in watertight compartments; and the teaching of prescribing shares in the tendency. The subject is usually made a part of materia medica in the student's curriculum and is taught with almost exclusive regard to the pharmaceutical exigencies of the case. Such clinical therapeutics as are introduced into the mode of teaching are purely hypothetical and serve sheerly as "instances" upon which to base the writing of a sample prescription, for the prime purpose of exercising the student's knowledge of compatibilities, solubilities, quantities, and the like. The truth is, such prescriptions as are brought forth by this process are never written in actual medical practice, because such stereotyped, cut and dried cases are never met with there.

Doctor Pritchard evidently has felt the absurdity of this kind of prescription writing and, so, has prepared a book which approaches the subject from the other side—the sensible, practical aspect. In England, as we have more than once pointed out, medical students "walk the hospital," learning their medicine at the bedside. This book represents bedside prescribing. The cases are not conveniently adjusted to the prescription, to show up the beauties of a certain formula, but are actual ones, to which the prescription has to be made to apply. Each case is followed up from beginning to end, the prescription

being changed from time to time, as the progress of the disease demands, the reasons for the change being clearly indicated in the clinical history.

It really is a capital little manual, well worth adopting in our medical schools, and equally well calculated to educate the physician in the intelligent writing of genuine clinical prescriptions.

LYNCH: "DISEASES OF THE RECTUM"

Diseases of the Rectum and Colon, and Their Surgical Treatment. By Jerome M. Lynch, M. D., Professor of Rectal and Intestinal Surgery, New York Policlinic. Illustrated with 228 engravings and 9 colored plates. Philadelphia and New York: Lea & Febiger. 1914. Price \$5.00.

The author disclaims any intention of offering his work as an encyclopedia or as a book for the specialist, although he modestly hopes that all surgeons who treat this class of cases may find interest in its pages. It is, he says, addressed more particularly to those practitioners who have not yet attained well-rounded experience in rectal and colonic surgery; and, as the needs of each reader are likely to be different, he judged that the only way to meet them all was to cover the entire field. Many matters, the author warns his readers, apparently trifling, make or mar the success of an operation; and these usually are left to the resourcefulness of the surgeon while operating. He has aimed to prepare the reader in advance for such emergencies. The book goes further, and includes the preparation and after-treatment of the patient, and a consideration of the possible complications and how to meet or avoid them.

The illustrations are very illuminative and really do help to an understanding of the text—which cannot always be said of such illustrations. Amebic dysentery, and its specific treatment with emetine, receives a due share of attention. The entire book is carefully written and bears the earmarks of a trustworthy, scientific treatment of a subject which is all too prone to exaggeration.

GLEASON: "NOSE, THROAT, AND EAR"

A Manual of Diseases of the Nose, Throat, and Ear. By E. B. Gleason, M. D., Professor of Otolaryngology in the Medico-Chirurgical College, Philadelphia. Third edition. Philadelphia

and London: W. B. Saunders Company. 1914. Price \$2.50 net.

The present (third) edition represents a careful revision of the second, and an elimination of much that has become practically obsolete. The author does not lose sight of the motive of the book, namely, to furnish students and general practitioners with practical, useful information concerning this specialty. With this in view, he rightly gives more space to diagnosis and treatment than to rare and difficult operations, which the beginner should not attempt.

Where possible technics are numerous, the author has selected that which in his judgment is the simplest, quickest, easiest, and yields the largest percentage of good results.

We rejoice to observe his conservatism in the matter of operative treatment in diseases of the accessory sinuses. The section on the internal ear represents the last word on this rather rapidly changing subject.

WACHENHEIM: "INFANT FEEDING"

Infant Feeding: Its Principles and Practice. By F. L. Wachenheim, M. D., Attending Pediatrician, Sydenham Hospital and Mt. Sinai Dispensary, New York. Lea & Febiger, Philadelphia. 1915. Price \$2.00.

The American practice of infant feeding by the percentage method is, I think, much more favorably adapted to the necessities of the case than the German habit of feeding sheerly according to caloric requirements. The ideal way, however, is to compound the two methods, or, rather, to proceed according to each method and then adjust one to the other. This is the sound principle upon which Doctor Wachenheim bases his excellent book now under review.

A large part of the book is devoted to a consideration of digestion, metabolism, and caloric requirements; and still another large portion is devoted to disorders of metabolism and their relations to the feeding problem.

Inasmuch as the key note of modern prophylaxis in infantile intestinal infections is to maintain normal feeding, as nearly as possible, this problem has, of late, acquired a very broad and far reaching significance. Doctor Wachenheim has grasped in very adequate fashion the wide reach of his subject. We heartily commend his book to the modern scientific practitioner.



Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6087.—“Nonsurgical Treatment of Varicocele.” J. R. P., California, wishes an effective treatment for varicocele, where the patient will not submit to operation. The latter method the Doctor has tried with success, but about four patients out of five will not submit to it.

Unfortunately, doctor, the treatment of varicocele is distinctly surgical, and the operation is so simple that any patient in his right mind should, if the matter is properly presented to him, be perfectly willing to submit to it.

As to the exact procedure, it is better, we hold, to make the incision over the external ring, as in herniotomy, than the usual incision into the scrotum. The cord, veins, and arteries may be pushed out of the opening and the veins separated and ligated. This operation is simpler and easier, involves less laceration and hemorrhage, and the danger of embolism, thrombosis, and sepsis is greatly diminished. The wound should be closed without drainage, and is best sealed with collodion, over which a protective gauze pad is placed.

The subcutaneous tying off of the vessels, as practiced by quacks and some advertising genitourinary specialists, not only is unscientific, but extremely dangerous, and we hardly need point out the absolute uselessness of local applications or the like.

QUERY 6088.—“Dermatitis Herpetiformis.” C. K., Hawaii, writes: In a baby 6 months old (she now is seven) there developed some blisters on her neck. She has been treated by different doctors, but without result. The blisters look like herpes, but the base is not inflamed. Their location is just over one of the cervicodorsal nerves, unilateral. Some of the vesicles become hemorrhagic. Their size varies from pinhead to splitpea. At some places they coalesce. Two weeks

ago, one of the patches became very sore, and swelling appeared. The child's constitution is normal. Could it be that this trouble is zoster? Eczema is excluded.”

We are inclined to believe that your patient suffers from dermatitis herpetiformis (hydroa herpetiformis, herpes bullosus, etc.). It is just possible, of course, that it is hydroa vacciniforme. Both of these, it is true, are rare diseases of this part of the world, but, from the literature at our disposal, we would imagine not so very infrequently encountered in subtropical and tropical regions.

Hydroa vacciniforme invariably occurs during the hot months. It begins in early life and disappears toward adult age. There are minor divergencies in the reported cases, but they all present vesicles, usually pronounced, and sometimes with a central depression. As a rule, the eruption appears on the nose, cheeks or neck, but may be sparsely scattered over other surfaces. The breaking-out may be preceded by a slight burning of the part. The vesicles or bullæ may or may not show a surrounding red areole and vary in size from that of a pinhead to that of a pea. The contents first are clear, but later may become milky or seropurulent. Frequently two or three groups of vesicles coalesce, forming an irregularly outlined bleb.

In some of the vesicles, there occurs slight sinking-in, or umbilication, in the central portion, where there appears a thin reddish or blackish crust, while the periphery consists of a surrounding wall of fluid; others may dry up evenly and become crusted; still others may rupture spontaneously.

In dermatitis herpetiformis, there is a decided tendency toward grouping. The disorder pursues a persistent chronic course. Itching usually is a troublesome feature. Generally the vesicles, pustules, and blebs are of irregular outline and show little disposition to spontaneous eruption; they occur

mostly in groups of two, three or more, and occasionally some of the blisters contain a slight admixture of blood. They rarely are smaller than a pinhead, mostly being of the size of small peas.

In children, the eruption as a rule is of a vesicular character. Pringle reports a case in a child of three; Bowen, one in a child of four years.

The etiology of the disease still is obscure. Enough is known to help us to consider it as essentially of a neurotic character. The possible reflex origin is shown in the case of a child, in which phimosis was the factor, permanent cure resulting after circumcision. Even nephritis has been associated as an etiologic factor, as evidenced by a glycosuria and albuminuria.

You will find both these conditions thoroughly discussed in Stelwagon's "Diseases of the Skin" and other recent similar works.

Considering the character of the lesions and length of time they have existed, we may exclude pemphigus; while zoster, as you know, is very rarely observed in early life. This latter disease reaches its full development in five or ten days and then begins to subside.

It would be well to have the blood and urine of this little patient examined. Also, we should be inclined, after causing a thorough elimination, to put her on nuclein and the arsenates.

QUERY 6089.—"Tibial Induration." J. B. T., West Virginia, has under observation a girl of eleven years who has a "conical enlargement" of the tibia, just at the insertion of the patellar ligament, a little below and to the outer side. This condition followed a fall. The Doctor thinks that there must have been a partial fracture, although the child did not complain after the lapse of a few days. The child is very delicate, hence, surgical means have not been resorted to. There is absolutely no history of blood taint in either of the parents' family.

Before expressing definite opinion, we ought to have a clearer idea of the exact character of the lesion. It hardly is reasonable to suppose that partial ("green-stick") fracture would occur in this location or, if it did, to result merely in the formation of an osseous enlargement, as mentioned. You do not state how long it is since the trauma was sustained, or when the enlargement first made its appearance. Has it increased in size? Is it absolutely fixed and of bonelike hardness, or can it be reduced by direct pressure?

Were there periostitis, we naturally should expect some pain, even inflammation of the joint. It is possible, unless the induration is hard, that it is a cystic tumor or a hernia containing synovial fluid. Ebner describes a ganglion which was located on the external semilunar cartilage of the knee. As you are aware, in ganglia, while the progress of degeneration is going on, palpation reveals an almost bony hardness. If you will favor us with clearer data, we shall be pleased to venture diagnostic and therapeutic suggestions.

QUERY 6090.—"Bearsfoot as an Anti-rheumatic." L. V. A., Ohio, wishes to know where he can obtain the species of hellebore called bearsfoot, by a doctor of Ann Arbor said to be an effective remedy for rheumatism.

Bearsfoot (*polymnia uvedalia*) is a comparatively little-used drug. A fluid extract can be obtained, the dose of which is from 3 to 10 drops every three hours. Being resinous, it is not miscible with water. Specific medicine *uvedalia*, supplied by Lloyd Brothers, is equivalent to the fluid extract.

This drug is recommended as useful in glandular enlargements, with functional atony, in impaired circulation, flabby and sallow tissues, thus being applicable in "chronic splenitis, chronic hepatitis, mammary abscess, intermittent fever, and chronic rheumatism." Ellingwood says it has been praised most highly in the treatment of rheumatism, lumbago, and other painful conditions dependent upon the imperfect removal of the products of retrograde metamorphosis.

Should you give this drug a trial, we trust you will favor us with a report of your experience. This writer tested *polymnia uvedalia* some years ago, but was not particularly impressed with its action.

QUERY 6091.—"Serum for Rose-Asthma." U. S., Nebraska, asks whether there is a serum for asthma, which has been proven to be efficacious, and we only can answer that, to the best of our knowledge, there is no serum treatment for asthma.

As, in our estimation at least, asthma is a symptom that may be owing to cardiac, bronchial or hepatic disorder, it is impossible to conceive how any serum could meet the varying requirements. It is possible that you are thinking of the so-called Dunbar's serum, which is administered in hay-fever, or "rose-asthma."

Dunbar's serum, better known as pollantin, really is an antitoxin obtained by animal

inoculations with a toxin extracted from certain grasses and cereals. In some cases, it produces violent paroxysms of sneezing; in others, absolutely no effect; then, again, some practitioners record cures in 60 percent of cases, and relief in 30 percent.

QUERY 6092.—“Hydrophobia: Pasteur Treatment vs. Madstones.” L., Georgia, has under care a boy who was bitten by a rabid dog on March 5. He immediately syringed out the wound with a strong solution of potassium permanganate and injected three ordinary syringefuls of the solution deeply around the wounds. The family of the boy are firm believers in the “madstone,” which was immediately applied by a relative who owns some. The Pasteur treatment was procured, but the parents refuse to allow its being used. The Doctor further writes: “I have saturated the patient with calcium sulphide, and also am giving echinacea. If you can suggest a better treatment, please do so. The boy seems to be doing well; there has been no rise of temperature so far, nor pain or swelling, only a little redness around one of the wounds, which are on the inside and outside of the leg, three inches below the knee. I sent the dog’s head to the state board of health, who report positive evidence of hydrophobia.”

There is just one thing to do, doctor, and that is, to insist absolutely upon the boy receiving the Pasteur treatment. There is no other remedy that will prove beneficial. The steps you have taken are perfectly proper. Of course, as the boy was bitten upon the extremity, it hardly is likely that any symptoms will show within thirty or sixty days. Had he been bitten on the head or face, trouble might be expected earlier. A rise in temperature is not to be looked for; the first symptoms may be a sense of constriction in the throat or stiffness of the jaw.

This writer has seen used one of the most celebrated “madstones” in this country, and its action certainly is somewhat puzzling (i. e., the adhesion and increase of weight); nevertheless, these stones cannot be regarded seriously as a remedial agent.

The fact that the state board of health reported the presence of Negri bodies makes the prognosis extremely unfavorable, unless the Pasteur treatment is instituted, quickly and vigorously. Frankly, were we in your place, we should put it up to the parents of the boy to accept such treatment or to relieve you entirely of responsibility.

QUERY 6093.—“Tinea Versicolor.” J. D. S., Pennsylvania, is treating an exceedingly stubborn case of what to all appearances is tinea versicolor. So far, all the treatments prescribed by dermatologists have failed to make any impression.

After causing the peeling-off of the skin of the chest and upper back with sulphur solution, the Doctor thought he had conquered; but, in a week’s time conditions were as bad as ever. “Now,” he adds, “if you have any suggestions to offer, I should greatly appreciate your advice, for, I have run the gamut of hyposulphite of soda, pure sulphurous acid, boric-acid lotions, mercurial ointments, synol (a phenolized liquid soap), and a lot more, but all without any apparent effect.”

We suggest that you use again the sulphur solution (which very closely resembles Vlem-inckx’s solution), starting by diluting it one-half with distilled water, then gradually increase the concentration until the full strength is arrived at. Should this fail, we should try a solution of silver nucleinate (colloidal silver).

Several physicians who recently have used this preparation report perfect results. In one case of ringworm involving most of the extensor surfaces of the body, a cure was obtained in five days. The disease had resisted every other known remedy.

Dilute citrine ointment, in alternation with a solution of corrosive sublimate, 4 grains to the ounce, with a few drops of ammonia added, often has proven curative.

Liquor picis alkalinus has been used extensively; similarly, carbenzol has yielded excellent results in some instances.

This is one of the few parasitic skin diseases in which internal treatment is unnecessary, although, of course, if any systemic disorder exists, it should be corrected.

QUERY 6094.—“Injections for Tuberculous Glands.” J. W. V., North Dakota, has a patient afflicted with enlarged tuberculous glands in the neck, but they are situated too deep and are too extensive to be cut out; however, he has an idea that if he had a proper fluid, to be injected into the caseous contents of each gland, he might hasten their destruction and absorption.

We question the desirability of injecting anything into enlarged glands; especially are such injections liable to prove dangerous in tuberculous adenitis. Whenever a patient will consent, tuberculous glands should be removed. This is particularly desirable when the cervical glands are enlarged, as a blow

upon them may liberate and disseminate the bacteria and set up a rapidly fatal general tuberculosis.

If, however, the patient will not submit to an operation, the diseased glands should be rubbed each night with an ichthyol or combined ichthyol and iodine ointment, while every second day they should be painted with decolorized tincture of iodine. (The proprietary iodox has been used by this writer with great satisfaction.) Internally, give irisoid and phytolaccoid three or four times daily; also, arsenous iodide, 1-64 grain, after each meal.

Not infrequently it is advisable to secure a more prompt and positive action by means of galvanic cataphoresis. Fisher and several other authors highly recommend the inunction of unguentum Cr  d  , and this has served this writer well. It is particularly applicable in acute adenitis.

Where no evidence of tuberculosis or syphilis exists, treatment consists in removing the cause—middle-ear inflammation, adenoids, diseased tonsils, and so on. At the same time, tonics should be administered, such as iron, iodides, nuclein, and the like. The patient should receive highly nutritious food and spend most of his time in the open air. Change of residence, especially from damp, low-lying localities, to the seashore or mountains is particularly beneficial.

In the tuberculous form, total removal of the affected glands is the only rational procedure. Here, again, reconstructive medication is essential.

This writer remembers reading, some time ago, an article in which the injection of tuberculous glands was recommended, but it did not appeal to him, and several practitioners who tried the method were extremely disappointed in the results; in fact, in more than one case rather alarming conditions were set up, necessitating prompt operation.

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 QUERY 6095.—R. B. L., Pennsylvania, presents the history of a rather peculiar case, in which a great variety of remedies have been used, but without success. The patient is a widow, aged thirty-eight; had been married about ten years, but never was pregnant. She has been troubled with dysmenorrhea since she started to menstruate, and always had some vomiting spells during menstruation. "In 1912, at a social, she ate pineapple ice-cream that had a peculiar taste, and in about a half hour this caused her (and some of the other guests) to vomit;

and ever since then she has had attacks of nausea and of vomiting about one hour after eating, the food thrown up tasting and smelling sour. She was so exhausted and emaciated from this constant vomiting that for about a year she was not expected to live; she lost about 40 pounds. At present she is doing her own housework, and has gained about 20 pounds, but she still has that sick-feeling and vomits after eating. Sometimes she goes into a coma, which lasts from one-half to two or even three hours. Her blood seemingly is in good condition; the urine is normal. There is a tenderness in the region of the stomach, but never after vomiting. This tenderness sometimes extends nearly down to the navel.

"The remedies prescribed by three other physicians gave no relief. The only drug I have found of service is morphine in small doses, administered hypodermically; she now is taking about 3-4 of a grain a day. I have tried to stop it, but then her appetite would fail and what she did eat would come up. I hope you can prescribe some remedy that will stop her nausea, so that I can cut out the morphine."

Although we have very carefully considered the clinical data presented, we dare not venture even a tentative diagnosis, until we have a clearer idea of the basal pathology and condition of the body-chemistry; and we suggest that you forward to our pathologist a specimen of urine (4 ounces from the total 24-hour output—stating the total quantity voided); also of the stomach contents, secured one hour after the administration of a test breakfast.

Toxic gastritis (from the ice-cream) hardly could persist for years. On the other hand, considering the fact that the woman frequently vomited during menstruation, bore no children during her ten years of married life, and always had dysmenorrhea, her trouble probably is reflex, and of pelvic origin. Doubtless gastric irritability was increased by the ingestion of tainted food.

Make a thorough examination, noting especially the condition of the cervical canal, size and position of uterus, and so on. Not infrequently a case of this kind responds promptly to dilation of the cervix and anal sphincter. In making your examination, see whether you can discover hyperesthetic areas along the spine. Test the reflexes carefully, also.

In the meantime, we suggest that you substitute the modified H-M-C combination, taken internally, for morphine injections.

Have you used the faradic current? Can you exclude an hysterical element?

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QUERY 6096.—“Typhoid Fever.” A. T. H., Nebraska, asks advice regarding the treatment of typhoid fever.

The treatment of typhoid fever has been outlined many, many times in these pages. It is essential to maintain a perfectly clean intestinal canal by the use of the sulphocarbolates. Nuclein should also be administered in full doses.

As soon as possible, give calomel, 1-10 to 1-6 grain, and podophyllin 1-64 to 1-6 grain (according to age) every fifteen to thirty minutes for six doses. During this period have the bowel well flushed with warm water. Two or three hours after the last dose of calomel and podophyllin, give a full teaspoonful of a laxative saline in at least eight ounces of water, and every three hours thereafter, 5 to 10 grains of the combined sulphocarbolates in solution, or crush a tablet and place the powder on the tongue, instructing the patient to wash it down with a few mouthfuls of water. The stool will soon become black, and gradually assume normal color. At first they will be extremely fetid, but later the odor will become natural.

Sponge the body with carbolicized epsom-salt solution (epsom salt, 1 ounce, water, 3 pints, carbolic acid, 10 minims).

Be careful to avoid chilling the body. If the fever is high, give the defervescent compound (aconitine, veratrine, and digitalin), one-quarter to one granule (according to age) every hour until the fever falls and skin is moist. Never try to reduce temperature unless it is excessive, nor until the bowel is emptied and the sulphocarbolates have been given for at least half a day.

If the stools are extremely frequent, you may add a little codeine to the sulphocarbolates or give the zinc and codeine compound tablet. Twice daily give an enema of sodium sulphocarbolate (sodium sulphocarbolate, 20 to 40 grains; water, 2 pints). Nuclein, 10 drops, three times daily. On the third night, repeat the calomel and podophyllin unless the case is well in hand, when it is advisable to give, three times daily, quinine arsenate and hydrastoid in proper dosage.

Of course, peculiar symptoms must be controlled with the indicated remedies, i. e., cactoid and strychnine if the heart and vitality fail; echinacea if sepsis is marked; baptisoid in the rare cases where even more evidence of sepsis exists—the breath is sweetish and yet

sickening, the edges of the tongue and buccal mucosa are purple and a thick, pasty streak presents down the center of the tongue. Such patients are usually semicomatose. Also, if there is any internal congestion, with high rectal or buccal temperature, cool skin, cold extremities, and pinched face, give atropine.

For tympanites give oil of cajeput, two drops on a little sugar, and apply hot turpentine stupes. For extreme nervousness, caffeine valerate, 1-3 of a grain hourly to effect; and where nausea is a pronounced feature, give albumen water (the white of a fresh egg, stirred in a glassful of water) two or three times a day.

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QUERY 6097.—“Narcophin.” W. T., Texas. This chemical, about which you inquire, is, as you correctly surmise, intended as a succedaneum for morphine and other opiates. It is a combination of morphine with narcotine, in the form of the double meconate, that is, morphine and codeine meconate, and contains 31.2 percent of basic morphine. The white bitter powder is soluble in water and in alcohol, and is administered hypodermically. The manufacturers, Boehringer and Soehne (Merck & Co., agents), recommending, ordinarily, from 15 to 30 drops of a 3-percent solution. The idea is, to have the main desirable, mutually corrective and supportive constituents of opium presented in a nearly natural form—in union with meconic acid.

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QUERY 6098.—“Mistletoe.” W. H. L., Oklahoma, wishes to know if mistletoe has any medicinal properties. He was called to see a little six-year-old Osage Indian girl a few months ago. There had been partial suppression of urine for two days, and her skin and eyes were very yellow. The family demanded that the urinary flow be started within a few minutes. Should the doctor fail, the father explained he was going to hunt for mistletoe. He said *his* father was a medicine man and would make a mistletoe tea, give it hot, and start the water in three minutes. The doctor wishes to know if the mistletoe is really of value in such cases.

The action of mistletoe has not been closely studied. Some claim it to be a reliable oxytocic, while others deny this. Same as to its value as a nervine. It has been taken as an abortifacient, and in such cases has often produced serious poisoning. Full doses cause vomiting, catharsis, tenesmus, prostration,

and occasionally bloody stools. Coma and convulsions may close the scene.

In the Query Department of the October issue (1914) of *CLINICAL MEDICINE*, we comment on a death supposed to have been caused by the self-administration of buttermilk and mistletoe. The young woman before dying confessed that she had taken sulphur and buttermilk for several days, and a strong decoction of mistletoe for three or four days.

Ellingwood recommends mistletoe as an oxytocic and claims that in postpartum and other uterine hemorrhages it is safer and more effective than ergot. It is also recommended in amenorrhea and dysmenorrhea.

According to Tascher and others, it is a remedy for cardiac hypertrophy and dropsy associated with enlarged heart. Cardiac hypertrophy, valvular insufficiency, feeble pulse, edema, dyspnea and inability to lie down are the symptoms of the cases favorably influenced by 20- to 30-drop doses of the fresh extract.

Recently, the French have strongly recommended guipsine, the active principle of viscum album, as a remedy in hypertension, arteriosclerosis, hemoptysis, disorders of the menopause, and interstitial nephritis. Guipsine is obtainable in ampules.

Ellingwood recommends specific mistletoe in determination of the blood to the brain, oft-recurring headache, tearing rheumatic or neuralgic pains, weak, irregular heart action with dyspnea, cardiac hypertrophy and valvular insufficiency. None of the writers credit mistletoe with diuretic properties.

Of course it is possible that the old Indian was not referring to viscum but to some other herb known to him as mistletoe. Does this epiphyte grow in your part of the world? It might be well to look into this matter further.

QUERY 6099.—“Maybe It's Scleroderma.” K. A. H., Virginia, writes as follows:

“I am sending you a picture of a man 70 years old, whose condition is a puzzle to me, but perhaps you can advise me. The nature of the disease is as follows: The scalp is tender and white as bleached cloth, seems to adhere to the bone, and exudes clear, irritating serum. The margin of the skin is not affected. The skin around the eye is slightly swollen, but not inflamed. The kidneys seem to be all right; bowels are active; gen-

eral health seems to be good. I have treated the sore for twelve months and have gotten the tenderness out and stopped the oozing, but around the left eye the skin still is white and seems to be adhering to the bone. What would you call it? How would you treat it to restore the skin to its natural color? How would you treat around the eye?”

Unfortunately, it is impossible for us to make a definite diagnosis from the data submitted. In symmetric gangrene, local asphyxia, we have coldness and paleness of the affected area, with pain or numbness. Sooner or later, however, the parts become livid and swollen. There may be formation of vesicles or bullæ along the margin. Usually the extremities, nose or ear suffer. An arteritis sometimes is responsible; other cases have a purely neurotic origin.

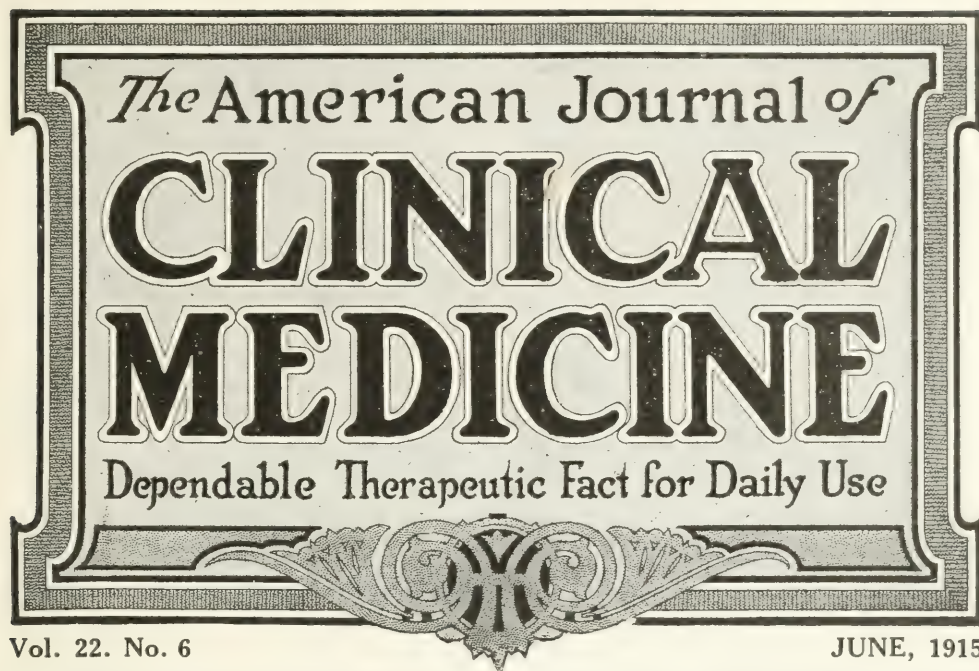
In scleroderma, we have a circumscribed, localized, rigid, indurated or “hidebound” condition. The surface is tense-looking, usually shiny. Occasionally we observe edematous infiltration, with or without preceding chill, fever or other constitutional disturbance. Where there is discharge, however, the affected part usually is edematous. The skin pits slightly upon pressure. This symptom disappears as the discharge lessens and edema disappears and the integument becomes hard and rigid.

We are inclined to believe that yours is a case of circumscribed scleroderma morphia, but presenting somewhat unusual features. It is just possible, of course, that a break occurred in the affected skin, with secondary infection. We must, however, consider the possibility of alopecia circumscripta (A. orbicularis). Here, as a rule, the affected area is distinctly depressed and atrophied (and usually anesthetic). If you have access to Stelwagon's “Diseases of the Skin,” study the chapters on scleroderma, alopecia, albinism, vitiligo, and others.

Are the man's finger-nails affected in any way? Any history of trauma? Possibility of luetic taint? The condition may be tropho-neurotic or of parasitic origin. In alopecia circumscripta, there usually is more or less involvement of the nails. The cause of that is unrecognized.

It would be well, we think, for you to send a scraping from the margin of the affected area and some of the discharge to an expert pathologist, for examination. The urine in this case should also be examined.





Rushing Patients to the Hospital

A CORRESPONDENT, commenting upon the article by Mr. Gifford in the April number of *CLINICAL MEDICINE*, entitled, "Why Doctors Fail," suggests, as one of the causes of financial embarrassment among physicians, the practice of rushing every patient off to a hospital, when the patient in question is neither physically in need of it nor financially prepared. The result is that whatever little money the patient may possess is eaten up in hospital expenses, he comes out insolvent, and the physician gets only a promise to pay in the future.

There is a great deal of truth in what our correspondent says, from more points of view than that of the doctor's economic interests—albeit that is a perfectly legitimate viewpoint, too. Indeed, for several years, we have been of the opinion that the hospital-stunt was being altogether overdone. Far be it from us to belittle the value of the hospital or to dissuade any physician from making use of its advantages; for, the opposite is true—as we need not say. There most assuredly are cases in which the interests of the patient absolutely demand the care and facilities to be found only in a hospital; and the physician who, in such cases, but, because

the patient is in difficult circumstances, foregoes or delays collection of part of his own well-earned fee, for the sake of procuring for his patient these needed advantages, is a hero and a benefactor; of whom, thank God, the medical profession is full. On the other hand, where the patient is amply able, financially, to stand both a hospital-bill and a doctor's bill, there is no reason why he should not be given the benefit of hospital care, even in those instances in which it is not absolutely essential to the successful outcome.

But, undoubtedly, there are many, very many, instances, as our correspondent suggests, in which the doctor rushes patients off to the hospital when it really is not necessary, either because the doctor has the hospital-habit, or in order to relieve himself of a certain amount of responsibility, or for advertising effect, when, as a matter of fact, the patient is unable to bear the combined expense of physician and hospital, and, so, ought not to be subjected to it.

From such an unwise and unnecessary practice both patient and physician are bound to suffer. Many times this sets the patient back to an extent from which it will take him months or even years to recover, while laying

the foundation for a superstructure of debt that grows—as debts have a habit of doing—until it overwhelms the victim. And in this unfortunate result the physician necessarily shares; for, every such financially disabled person is a dead-weight upon the prosperity of the community, including its medical constituents.

We will not say more upon the subject, lest we be suspected of decrying the hospital or of discouraging the legitimate resort to it. It is not of its use, but of its abuse, that we now are speaking. And we make this brief mention of the matter for the purpose of pointing out that in this, as in all other respects, the interests of the physician are bound up with those of his patients. Consideration for the circumstances and position of the patient not only is incumbent upon the doctor, as a man of honor, but in every case will redound to the circumstances and economic interest of the doctor himself.

I do the very best I know how—the very best I can do; and I mean to keep doing so until the end. If the end brings me out all right, what is said against me won't amount to anything. If the end brings me out wrong, ten angels swearing I was right would make no difference.—Abraham Lincoln

THE ABBOTT ALKALOIDAL COMPANY CHANGES ITS NAME

The Abbott Alkaloidal Company has issued the following important and significant statement:

Owing to the rapid expansion and broad generalization of its business as manufacturing and importing chemists, The Abbott Alkaloidal Company has deemed it expedient to change its incorporate name to The Abbott Laboratories, and has done so. No change in personnel or policies. Our business is to serve the professions, through the general channels of trade or direct (at the most convenient point), as best serves their convenience. Price list on request.

For a number of years, this company has been broadening out and enlarging the scope of its activities. As most readers of this journal will remember, some four or five years ago it entered the biologic field and now puts out a full line of serums, antitoxins, vaccines, and similar products, both for human and veterinary practice. Also, it is engaged in the manufacture of pure chemicals and is constantly adding to its already large line of pharmaceutical products, many of which are not distinctively alkaloidal.

It is only fitting and proper, therefore, that a name should be adopted, which is broad enough to cover all the activities of this

progressive, up-to-date American enterprise, in the future prosperity of which we are sure every reader of CLINICAL MEDICINE has a warm personal interest.

The old name, "The Abbott Alkaloidal Company," is dear to many of us. Under its new name (The Abbott Laboratories), we believe that this enterprise is destined to have a new birth, put forth greater endeavor, and realize greater achievements. The active-principle idea, of course, will remain the central one in all its future activities.

RENEW YOUR LICENSE

Every doctor, dentist, and veterinarian living in the United States should bear in mind that the license taken out under the Federal Antinarcotic Law on March 1 expires on July 1 next. Send \$1.00, at once, to your local Collector of Internal Revenue to renew the license for one full year. Remember that the fiscal year begins on July 1 and that the license procured at this time will be good until July 1, 1916.

Do not forget this. Remember the confusion, disturbance, and trouble incurred when you took out your first license on March 1, and anticipate such trouble by making application immediately.

Also, if you need more of the official order-blanks, it is a good time to put in your requisition now. The price of these blanks is one cent each, and they are sold in blocks of ten.

THE FORCE OF NEGATION

If you haven't read it, get that delightfully woody book of Gene Stratton Porter, ycleped "The Harvester." You will be interested by the pretty story with its impossible feminine ideals, edified by many things it tells that you didn't know, and amused by others the authoress thinks she knows, but doesn't.

The Harvester is a gatherer of medicinal herbs. He goes further; tries his hand at "compounding," and concocts a wonderful remedy. With this, he saves his ladylove after the doctor has given her up. Then, instead of launching into the patent-medicine business, as was to be expected, he heroically resolves to present his remedy to the medical profession, in conclave assembled. This body of grave and reverend seigniors grants the herbalist the floor and listens in spellbound silence while he tells of mixing so many handfuls of sweet marjoram with half as much of pennyroyal and a peck of skunk-cabbage, expressing the juices, adding rock-candy and

proof spirits and a cake of compressed yeast; then trickling a few drops between the lips of a corpse and seeing the dead return to life and ask for a drink of whisky. Thereupon the doctors, whose only thought is that they have been furnished the means of better accomplishing their duties in saving life, are enthusiastically grateful, vote their thanks and a medal, and the herb-man gets his picture in the papers.

How very like the truth! Just the way doctors welcome any promising innovation, isn't it! Well, not quite.

De La Motte Fouqué, in one of his romances, describes a visit made by his hero to the coast of Norway. Here he found a spear on an altar at the top of a hill, said hill being lined with stalwart Norwegians armed with sword and shield; the welcome to the visitor being permission to fight his way to the top and secure the spear—if he could. That describes quite exactly the sort of welcome accorded the presumptuous being who seeks to present the medical profession anything new and better than their oldtime stuff.

Go back as far or as near as you like over the history of medicine, and this has been true of every real advance that has been proposed. Not one physician over the age of 45 years accepted Harvey's discovery of the circulation of the blood. The persecution accorded the discoverers of vaccination, anesthesia, and other great advances in our science are too well known to deserve more than mention. And the same spirit is manifested individually when any rash man attempts to present a new idea or remedy to his personal colleagues. At once the instinctive opposition of each is aroused. That fellow thinks he can teach *me*! Well, hardly! Presumptuous ass! And his little idealet is squelched at the outset.

This spirit is the ruling principle of man. It is manifested in all lines of human endeavor, except possibly in business and mechanics, where the late improvements are taken up, even though they relegate many hundreds of thousands in expensive machinery to the scrap-heap.

We need not berate ourselves, then, as being more conservative or less willing to be taught than other men. The clergy have, assuredly, no stones to throw at us. But rather do we look on this as a natural, human phenomenon; and defend it, by claiming that, if any innovation has not the ability to maintain itself and make its way, it has not that intrinsic merit, that vitality that alone approves its right to survive. Instead of weakly

wailing over our slain child of the mind, let us get out and fight for it manfully, confident that in the end the right must prevail, else cosmos sinks into chaos.

A very pretty example is afforded by the latest raid on viburnum. The man who has popularized the plant is touched up delicately but effectually; not so much as the proverbial grease spot remaining to show his former existence. Then the drug itself is lifted on tongs and held to the light. Damned with the very faintest of faint praise—it may possibly be slightly astringent and a bitter tonic; if, indeed, bitters are really tonic, for they did not increase the secretion of dogs' gastric juice—although who ever gave them to increase dogs' digestion? But, as to viburnum having any remedial effect in the line of maladies for which it has been recommended, that is absurd. Because—I am not convinced that such is the case. It is impossible to read that article and not see that the writer started it with the intention of writing the drug *down*.

True, many hundreds of doctors have administered this very preparation of viburnum, to check the contractions of a pregnant uterus trying to throw off its contents, and have seen the irritated organ quiet down and the fetus be retained under its use—but that means nothing, for *I* am not convinced. And until *I* am convinced, nobody must use the drug. Should the clinician venture to stick to his guns, he is met by the unanswerable question, "How do you *know* the viburnum had anything to do with the result?"

Few have had, in their own person, experiences enough to answer this question confidently. The testimony of hundreds of practitioners, scattered far, repeated during years of actual practice, is of value only when collected and arranged into masses.

Knowing this proclivity of men to knock the other man's suggestions, and especially when the innovation is so startling as to threaten demolition of old structures and rebuilding of the edifices of belief and practice, we were impressed by the vehemence with which hypodermic anesthesia was antagonized. Compare this with the enthusiasm with which Bergeron's gas-inflation method of treating tuberculosis was received. Here was no ordinary opposition, but a general, radical taking of sides against the innovation by the big men, with a unanimity that denoted *scare*—it was a matter that must have struck deeply, to arouse such vehemence. So, we expected to find this a revolution-making matter, one that would rattle down a lot of

dry bones from the shelves on which they had been displayed, ticketed and exhibited as *complete*.

Gauss published his first paper, describing his technic; and a number of his Germanic colleagues took up the idea, used a technic that Gauss himself declared would ensure failure, and decided against the method. A distinguished American physician tried it in just one solitary case, gathered the early statistics from these Germans who had not used Gauss's method, and juggled his statistics so as to deduce a very bad mortality average. Around this small point the leaders of medical matters and thought crystallized. The masses of the profession, at least in America, continued to use the method and found it good. The intention of condemning the method is evident from the first paragraph.

Then the ubiquitous public press got hold of it and let the women hear of the means of avoiding the pangs of childbirth. Woman rushed to her doctor with the new idea, Doctor heard her, looked wise, told her he knew all about it, and there was nothing in it. A century before, he had done the same thing when Simpson introduced chloroform, but then the doctor also talked like a book, of woman being condemned to bear her children in sorrow, because of Eve, you know. He may have hinted as much this time, but, at any rate, when he got through talking, woman looked at him a moment curiously, and then—asked him the address of the doctor who used the twilight-sleep method of painless childbirth!

There the matter rests. He who will may read the sequel.

The wife who asks about the matter and gets no encouragement from her husband looks after him as he goes out to get a tooth extracted under gas; she can not tell him to have the baby, as he seems to like that sort of agony. But she does some thinking, anyhow, and she says: "I am not stuck on this method specially, but I demand that the curse of parturition shall be lifted from me. If this is not an ideal method, devise one that will prove to be such; and, until you do, I shall use this. There may be some danger, but so is there in unsolaced childbearing; and I'll risk it."

And now we hark back to the thought with which this screed began—the force of negation. For, the greatest obstacle any new idea has to meet is not so much that of active opposition as that of inertia and of the negative instinct. Especially is this directed against

anything in the way of therapeutics. As soon as anybody ventures the suggestion that a thing is good for any disease, the little hammers appear and the knocking begins. So sure is this, that the therapeutic article dealing with the new or unusual has well-nigh disappeared from current medical literature.

Talk to clinicians, and you find they are having interesting experiences: ask them to publish, and they are afraid of the certain knocking they will get.

A man should learn to detect and watch that gleam of light which flashes across the mind from within, more than the luster of the firmament of bards and sages. Yet he dismisses without notice his thought, because it is his. In every work of genius we recognize our own rejected thoughts; they come back to us with a certain alienated majesty.—R. W. Emerson.

A NEW RULING UNDER THE HARRISON ANTINARCOTIC LAW

No sooner do we get used to the workings of the federal antinarcotic law, as in the beginning interpreted, when a new decision comes from Washington that completely changes the meaning of some sections. The latest ruling, which is embodied in Treasury Decision 2194, reads as follows:

Synthetic Substitutes: In exempting from its provisions certain preparations and remedies, the Act (Sec. 6) expressly excludes from such exemptions "preparations which contain cocaine or any of its salts or alpha or beta eucaine or any of their salts or any synthetic substitute for them." To effect the obvious purpose of this provision of the Act, the words "synthetic substitutes" are held to apply to any artificial substance or preparation which is or may be substituted for cocaine, alpha or beta eucaine, or any of their salts as ordinarily prescribed or used, and not necessarily to a purely synthetic substitute which, chemically, is identically the same as the drug for which it may be so substituted.

Further, both the title and Sec. 1 of this law include "opium or coca-leaves or any compound, manufacture, salt, derivative or preparation thereof," and, under a liberal interpretation of the word "derivative," from a chemical point of view, the several cocaine substitutes would also be clearly included.

Manufacturers of, dealers in, and physicians prescribing any such substitutes, as above defined, should, therefore, register and otherwise conform to the requirements of this law and the regulations issued thereunder.

The meaning of this decision plainly is, that *any remedy* that is used *for the same purpose* as cocaine or alpha or beta eucaine, *providing it is a synthetic*, comes under the provisions of the Federal Antinarcotic Law, and in accordance therewith physicians, dentists,

and veterinarians are required by law to keep records of all such drugs that they may dispense, distribute, or administer. Under a prior ruling, such remedies as novocaine, stovaine, alypin, orthoform, and the like, were construed not to be narcotics. Under this latest ruling, which, by the way, was issued on April 26, *they are now to be included in the provisions of the Act*, and the fact that not one of them is known to be used as a habit-forming drug makes no difference (to the Commissioner) whatever.

Every physician who has on hand and is using any such preparation as a local anesthetic in a manner similar to cocaine must hereafter keep a record of all he may dispense, and must add to his inventory of March 1, the amount of such drug which he now has in his possession.

We will not drown in wordy praise,
The kindly thoughts that rise;
If friendship owns one tender phrase,
He reads it in our eyes.
—O. W. Holmes.

NEW FACTS ABOUT TYPHUS FEVER

A young American bacteriologist, Dr. Henry Plotz, who is connected with the Mount Sinai Hospital, of New York City, at a meeting of the New York Pathological Society, held April 15, reported the discovery by himself of the specific organism of typhus fever. That Doctor Plotz's announcement is not a premature flash in the pan, unsupported by adequate evidence, is shown by the fact that his work has received the endorsement of such men as Hans Zinsser, professor of bacteriology at Columbia University; Doctors Noguchi and Meltzer, of the Rockefeller Institute; and Dr. William H. Park, director of the research-laboratories of the New York City Department of Health.

Scientific laurels have come early to Doctor Plotz, who was graduated from the medical department of Columbia University in 1913 and is now only in his twenty-fifth year. He became interested in typhus fever while still a student at Columbia, soon after Anderson and Goldberger announced the discovery that Brill's disease and true typhus fever are identical.

The first bacteriologic studies made by Doctor Plotz were with the blood of patients suffering from Brill's disease. From this, he isolated a bacillus that was shown to be capable of producing the disease when introduced into the bodies of guinea-pigs and monkeys.

Later, in the Quarantine Hospital of the Port of New York, he obtained specimens of blood from several typhus-patients who had brought the disease from Europe; and from their blood he isolated a bacillus which proved to be identical with that obtained from patients suffering from Brill's disease. The conclusion seems to be inevitable, therefore, that the two diseases, while differing greatly in severity, really are caused by two differing strains of the same microorganism.

We learn from *The Boston Medical and Surgical Journal* that Doctor Brill himself finally has admitted the absolute identity of these two types of typhus, being convinced by the demonstrations relative to the identity of the bacteria found in the two forms of this disease. This organism has received the designation *bacillus typhi exanthematici*.

As has already been stated repeatedly in these pages, typhus fever is now known to be conveyed, principally at least, by the bite of any one of the three species of the louse; a fact clearly demonstrated by Anderson and Goldberger. Theoretically, therefore, it should be relatively easy to arrest the progress of an epidemic of this ravaging disease. In practice, however, the problem really presents extreme difficulties, as is shown by the spread of typhus fever in war- and plague-devastated Serbia.

Naturally, the discovery of the specific organism has led to efforts to secure a specific remedy, and already the announcement is made that Plotz has succeeded in preparing an antityphus vaccine, similar to the antityphoid vaccine so generally employed for prophylactic purposes. Plotz himself was the first person to be vaccinated, and Dr. Hans Zinsser, together with other members of the Rockefeller Institute expedition now on the way to Serbia, also were submitted to the same treatment; and the intention is, to give this serum a careful trial in that country.

Should Plotz's discovery result in the development of practical methods of preventing typhus fever and arresting its spread in epidemics such as that now witnessed in southeastern Europe, it will deserve a place among the great discoveries of medicine, and reflect not a little honor upon this young scientist.

It is significant, as *The Journal of the American Medical Association* points out, that a very large portion of the pioneer work relative to the cause and conquest of the insect-borne diseases has been contributed by American physicians. We need but mention the names of Reed, Carroll, Lazear, and Agramonte in

connection with yellow-fever; Ricketts, King, and McClintic, with Rocky Mountain spotted fever; McCoy, with plague; and Anderson, Goldberger, Ricketts, and Wilder, with typhus fever. As *The Journal* reminds us, the foundation for this work was laid by Theobald Smith, who showed that the Texas fever of cattle is transmitted by the bite of a tick.

Doctor Plotz certainly has enlisted in a goodly company. We can all join in congratulating this able young man.

There's not the smallest orb that thou behold'st,
But in his motion like an angel sings,
Still quiring to the young-eyed cherubim;
Such harmony is in immortal souls,
But whilst this muddy vesture of decay
Doth grossly close us in, we cannot hear it.

—Shakespeare.

GIVE BACK THE LEGIONS, VARUS!

A Chicago daily newspaper suggests that, as a worthy contribution of art to the lessons of the great war, some sculptor should fashion a woman's figure, noble and majestic, fitted to tower on some imposing pedestal and catch the whole world's sight, impressing upon her lips a beauteous scorn and giving her form an attitude of noble indignation; that this statue should be called Europa, and on the pedestal inscribe the accusing cry of the Roman emperor to the general who returned to Rome after having lost his army in the forests of the North: "Give back my legions, Varus!"

"Give back the legions of fathers, of brothers, of sons, whose death made desolate so many hearts, made dim the light in untold numbers of loving eyes, laid on the little child the blight of early orphanhood, and on the weak woman the burden of too great a struggle against poverty and despair!

"But, most of all, give me back the legions of noble thoughts and aspirations, of dreams of progress and of better things, which must for years lie trampled beneath the iron heel of hate and poverty! Give back the ideal of a brotherhood too broad for any single land, that must now, for millions of men and women, again slowly struggle upward toward the light and free expression! Give back that city, not made with hands, whose white walls and gleaming towers so often seemed near the yearning vision!"

It is somewhat of an anticlimax to give so universal a human cry any particularization. It is characteristic of the human heart, however, to seize upon universal sentiments

and apply them to its own special needs and interests. My own heart and life, as of most of my readers, are bound up chiefly in medicine—medicine in its broadest aspects, to be sure, with all its world-aims and human interests, yet, medicine, after all, dear reader, is your mistress and mine, and it is to the achievements and aspirations and ideals of medicine that you and I, here and now, apply the words I have quoted above. It is of them, in particular, that we sadly cry to the war-god of Europe, "Give back the legions, Varus!"

Already we are stricken and lonely. Already the pleasant and profitable intercourse, to and fro, between the great ones of the nations, to which we delighted to sit and listen like favored guests at a banquet of good things, has died away. The friendly rivalry of national intellectual giants, all eagerly bent upon the betterment of men and the advancement of the race, is paralyzed. Genius no longer calls to genius across the salt estranging sea. We

Miss to hear high talk of noble deeds
As in the golden days.

Some of our heroes already have fallen
asleep in the trenches.

. . . Such a sleep
They sleep, these men we loved. I think that we
Shall never more, at any future time,
Delight our souls with talk of knightly deeds,
Walking about the gardens and the halls
Of Camelot, as in the days that were.

"Give back the legions, Varus!"

All of this is saddening enough, and I, for one, go mourning all my days for thinking that "now the good old times are dead." But even this is not the worst. Just as one who is bereaved does not at once plumb the full measure of his loss, because the shock stuns him, but only after his return to the empty house and the silent rooms, realizes the dull blankness of his desolation, so, when at last the clash of arms is over and the excitement of war has died down, we shall realize more keenly than ever that the battlefields have been the slaughter-ground, not alone of friends and brothers, whom we had learned to love and to honor, but of high ideals and of cherished purposes and of peaceful emprises, which, as the periodical mentioned truly says, must now "again struggle slowly upward toward light and expression." We had thought that the fraternity of science and scholarship, at least, would have withstood the strain; but it, too, seems to have been swept into the fearful cataclysm, and many a weary year will pass before this

community of the mind will again attain the frankness and freedom that was its glory before this struggle of the nations.

Whatever is to be saved from the sad wreck, to serve as the nucleus of reconstruction, must be saved by American hands. The ark of the covenant is in our keeping. Its conservation is our solemn task. With malice toward none, with charity for all, with firmness in the right, as God gives us to see the right, it is for us American physicians, representing the link between the achievements of the past and the promise of the future, to bear up the ark, that it may not touch the ground, and to stand ready, in this as in other matters, to mediate acceptably when the hour of mediation shall strike. In this solemn task, each one of us has his part to play, however humble it may be.

DR. JOHN DILL ROBERTSON

We take special pleasure in extending congratulations to Dr. John Dill Robertson, Chicago's new Commissioner of Health. Those who profess to know about such things declare that the Doctor contributed not a little to rolling up the enormous plurality of more than 140,000 which landed William Hale Thompson in the mayor's chair. Knowing Doctor Robertson well and understanding fully his dynamic power and irresistible energy, we are convinced, not only that he helped to elect Mayor Thompson, but also that Mr. Thompson made no mistake in choosing Doctor Robertson as a member of his cabinet.

Dr. John Dill Robertson was born in Mechanicsburg, Pennsylvania, on March 8, 1871. His father, who was a Civil War veteran, died when he was but ten months old, and at the age of twelve the boy had to depend upon his own resources to make his way in life. His first "position" was as clerk in a combined drugstore and grocery store. Later he took up telegraphy, and still later—to be exact, in 1893—he came to Chicago to begin the study of medicine and surgery. He graduated from Bennett Medical College in 1896, and immediately entered Cook County Hospital as an interne. His later history is known to most readers of this journal.

Doctor Robertson is a natural organizer and promoter. He has been instrumental in putting two Chicago medical colleges on their feet, and has built up Bennett Medical College, now the Medical Department of Loyola University, from a weak Eclectic

institution to one of the largest and most successful regular medical schools in the country. He has also established two hospitals, the Frances Willard Hospital and the Jefferson Park Hospital. He is also a member of the State Board of Agriculture of Illinois and founder of the State Fair School for Boys.

Doctor Robertson's position in the medical world needs no special explanation in these columns, to which he has in days gone by been an occasional contributor. He is a surgeon of national reputation—an operator of great ability and experience. He is still a young man, and has new laurels to win—and will win them. Knowing the Doctor as we do, we have great faith in him and are fully convinced that he will make his administration of the Health Department of Chicago one of the best, if not the best, that the city has ever seen. We extend to him our hearty congratulations and best wishes.

Certainly, in our own little sphere it is not the most active people to whom we owe the most. Among the common people whom we know, it is not necessarily those who are the busiest, nor those who, meteor-like, are ever on the rush after some visible change or work. It is the lives, like the stars, which simply pour down on us the calm light of their bright, faithful being, up to which we look, and out of which we gather the deepest calm and courage.—Phillips Brooks.

AMERICAN POSTGRADUATE COURSES

About this time of year, the American physician and student, as a rule, begins to consider the question of hieing himself away for the summer to some European postgraduate center, where he either may round out his college curriculum or else acquaint himself with some of the progress and the achievements of medical science that have passed over his head while he has been busy with the exigencies of his practice. In this particular year, however, the conditions in Europe will seriously interfere with plans of this kind and of necessity raise in his mind the desirability of selecting some postgraduate school of our own country.

This journal has, in the past, been a consistent champion of the advantages of the American postgraduate course, as compared with that of Europe. We recognize, just as keenly as anyone, the broadening and cultural influence of mixing with the people of other civilized countries and races, and seeing how they do things in other lands. We realize that, in medical science at least, foreign peoples have much to impart that America

would do well to learn, and, consequently, that in times of peace, for the exceptional man who may have spare time and means at his disposal, a visit to the European centers of medicine is to be commended. For the average practitioner, whose time and money are both limited and who must crowd into a month or so the maximum of advantage with the minimum of waste, we always have doubted the wisdom of such a course, even during the most favorable times.

Just now, however, this question need not be discussed. Europe is a closed territory so far as postgraduate work is concerned. If he is to undertake postgraduate work at all, the American physician will be obliged to seek it in his own country. And, in the main, we believe it will be a capital thing. It will lead many a medical man to "discover America." He will find, to his surprise, that his time and funds will yield far more genuinely satisfactory returns by his putting in the summer months at one or more of the numerous excellent American postgraduate schools than by a costly and hurried trip to Europe.

Here, the doctor may reap all the benefits of instruction from men who have attended the famed European centers, with much greater facilities and better capacity for profiting by them than he himself would enjoy if he went to Europe; and he will receive solid work and experience without any of the red tape and paraphernalia that always entail so much waste of time and money on the other side. So, when he returns to his home practice or undertakes his life-work, as the case may be, while he may not wear the ornate distinction that pertains (or used to pertain) to the man who has "been to Europe," he will find himself in possession of real advantages certain to help him to do his tasks in a thorough and workmanlike fashion—and that, after all, is what brings both satisfaction and success.

There are, as we have said, many excellent postgraduate schools and clinics in this country—schools fully equal to anything that ever came out of Europe. The closure of the European centers need prove no deprivation to a single American; on the contrary, it should prove the means of opening our eyes to the splendid opportunities in our own land, right at our door.

We shall be glad to advise with any of our readers who may contemplate taking a postgraduate course in the coming season and desire information and counsel in the selection of a suitable place for the particular kind

of work they wish to pursue. Make use of us freely, in this, as in any and every other matter.

Some say that the age of chivalry is past. The age of chivalry is never past so long as there is a wrong left undressed on earth and a man or woman left to say, "I will redress that wrong, or I will spend my life in the attempt." The age of chivalry is never past so long as we have faith enough to say, "God will help me to redress that wrong, or, if not me, those that come after me."—Charles Kingsley.

USE THE ALKALOID—GO FORWARD, NOT BACKWARD!

Rarely indeed has the scientific relativity between a crude drug and its alkaloid been so clearly exemplified and closely paralleled by its general and clinical history as in the case of ipecacuanha and its active principle, emetine. One has but to turn to this interesting history, and there read the most powerful *argumentum ad rem* that could possibly be formulated in favor of the alkaloid as against the crude drug. In this respect, as Dr. Hermann Prinz pertinently remarks in a recent article on the subject, the story of ipecacuanha and emetine is an almost complete parallel of the record of cinchona bark and its alkaloid, quinine.

Ipecac, like cinchona bark, was extensively used for many years, and, in spite of the crudities of its pharmacology, the specific influence of its emetine alkaloid over amebic dysentery was sufficiently apparent to foreshadow and lead up to the ultimate denouement achieved by Vedder in 1911—the demonstration of the positive amebicidal action of emetine, comparable, if not superior, to the demonstration of the antimalarial specificity of quinine.

It is true that with ipecac, as intimated, clinicians were able to obtain something of the antamebic effects of the drug; but in an exceedingly crude, precarious, unreliable, and disagreeable fashion, due chiefly to the extremely nauseating properties of the cephaeline coexisting with the emetine. The varying quantities of emetine and cephaeline, respectively, made the remedial action of the drug and its nauseating effect a matter of hopeless uncertainty. So precarious, in fact, and so disagreeable was its use, that even the benefits that it conferred could never attain any wide adoption by western civilization, however much the patient Hindu might be prevailed upon to undergo the treatment.

With the discovery of the specificity of the alkaloid emetine, the entire clinical situation

underwent a complete and conspicuous change. One has but to read Leonard Rogers' comparative report to realize the utterness of that change.

With emetine we have a clean-cut, definite, uniform, reliable, accurate antamebic therapy, with none of the disagreeable or impracticable features of ipecac. As I have said, it is even superior to the clean-cut specificity of quinine, as compared with cinchona. Nowadays nobody dreams of using cinchona for the specific action of quinine; cinchona still holds a place in the Pharmacopeia, and in therapeutic practice, but sheerly as a stomachic bitter, not as an antimalarial.

By the same token, there may be, and unquestionably are, still therapeutic uses for ipecac; but to employ ipecac for the specific amebicidal action of emetine, in dysentery, pyorrhea, or any other disease, is a foolish and unwarrantable step backward, comparable in kind to a return to the old cinchona practice, and a great deal worse than that in degree, as the untoward effects of ipecac are worse than those of cinchona, and the relative superiority of emetine greater than that of quinine.

Do not allow yourself, doctor, to be persuaded or misled into such a backward step.

The great error, it seems to me, in medicine, in our day, is to magnify the importance of pathological conditions and then become skeptical because we know, or at least think we do, that we can't cure them with drugs or any known treatment. The other equally great error is to minimize the value of relief of symptoms.—Beverly Robinson.

DIAGNOSIS VERSUS TREATMENT

In the pages of a lay contemporary (the name of the journal is immaterial), I have just come across the following paragraph:

"People fail to realize that the most serious difficulties that confront a doctor are, not those of treatment, but of diagnosis. The difference between a good physician and a poor one has little to do with the failure to apply remedies suitable for a given disease, but lies in the superior ability of the former to ascertain with speed and certainty what the patient is suffering from. Once a correct diagnosis has been made, the proper way of meeting the condition can be found by reference to any standard work on the practice of medicine."

This sort of statement is made so frequently, not only by laymen, but even by individual men inside the profession as well as in medical journals—when, in fact, it repre-

sents such an utterly false conception of things—that I feel constrained to make it the text of a few brief remarks.

I do not belittle the importance of diagnosis. As every reader of CLINICAL MEDICINE knows, the urgent, all-absorbing, ultra-imperative necessity of thorough, painstaking, accurate diagnosis has been preached, early and late, in season and out of season, from these pages. Chronologically speaking, it is the *first* important duty that confronts the doctor. But, that it is the *only* problem, or even the most momentous, that makes demands upon his faculties and his training, or that it marks the only, or even the chief, point of departure between the good physician and the poor one, is as foolish as it is gratuitous.

The truth is, of course, that neither diagnosis nor any other of the collateral branches of medicine has any meaning, any *raison d'être*, any orientation, except as it subserves treatment. Treatment is the end-all and be-all of the healing art, to which everything else is tributary; otherwise, it is of no value to medicine.

To be sure, a correct diagnosis is a preliminary essential to good treatment; but, to imagine that, once the diagnosis is made, the treatment presents itself, ready-made, like the label around a package from a penny-in-the-slot machine, is, to evince an extremely crude conception of what diagnosis implies. One might just as well say, the real and only crux of success in finance is, to get money; once obtained, any fool can tell you how to invest it. So, I suppose, he could; but hardly so as to help the financial game very much. Investing one's money is just as important a part in the business of finance as the getting of it—more important, I rather fancy, financiers will tell you. By the same token, to arrive at a correct diagnosis, is not of any great value in medicine, unless you know how to utilize to best advantage the diagnostic information thus acquired.

There's the point, exactly. A diagnosis is not a material but elusive now-you-see-it-and-now-you-don't something that the "good" physician, by some species of legerdemain, is able, blindfolded, to conjure out of its hiding-place and tell what it is by fingering and inspecting it. Diagnosis, clearly, is simply a collection of information about your patient's condition, which you obtain by means of various methods (*also* "to be found by reference to any standard textbook" on diagnosis), and which, viewed as a whole, gives you an idea, sometimes fairly definite, some-

times decidedly tentative only, of the disordered processes at the moment going on within the patient's body.

So far, so good. Certainly, it takes a good physician to make a good diagnosis. Still, there is nothing uncanny or mysterious about it. Any physician who knows his physiology and pathology, and will take the pains to apply the known methods of diagnostics, can do it.

If there be any question at all of finding things readymade "by reference to a standard work," it applies to diagnosis more than it does to treatment. I do not mean that either of them—or, for that matter, anything else in the practice of medicine—can be done in that way. But, really, if we are going to make comparisons of that sort between the two, it is a much more feasible thing for the doctor nowadays to get his diagnosis readymade than his treatment; for, in the former, he has a hundred and one expert aids at his service—the laboratory, the x-ray, the biologic test, and what-not—but, in the latter, he must rely wholly upon his own judgment.

There—I have said it! If we wish to express the crucial difference between the good physician and the poor one, it is to be summed up in that one word, *judgment*. Neither in diagnosis alone, nor in treatment alone, but in the *judgment* with which the otherwise fully equipped physician proceeds lies his success or his failure. It is precisely the same thing that makes a good business man.

And, so, I repeat, the exercise of judgment is taxed far more crucially in the matter of treatment than in the matter of diagnosis; for, as already intimated, modern diagnostics have taken diagnosis largely out of the realm of judgment and made more or less of a Q. E. D. procedure of it; but, treatment always has been, and always will be, a problem for the exercise of the very nicest kind of judgment, to which must be brought every faculty and quality and experience the physician possesses.

Anyone who imagines for a single moment that, having arrived at a diagnosis, all the doctor has to do is, to label the diagnosis with a disease-name and then just look up the name in his book for the axiomatic treatment for that disease, has another guess coming.

If you should ask me, *that* is precisely the point of departure between the good doctor and the poor one. I say again, all that up to this point has been done by the doctor and by those who have aided him has merely been preliminary data-gathering, in preparation for the supreme exercise of the essential, par-

amount function for which the physician exists. Up to this point, it is quite possible for good and poor physician alike to arrive at the same goal, inasmuch as there are certain established diagnostic measures to be applied that will almost automatically work out the diagnosis. Right here, is the parting of the ways; for, from this on all depends upon the trained *knowledge*, the ripe *experience*, and the wise *judgment* of the physician himself.

Let the weakest, let the humblest remember that in his daily course he can, if he will, shed around him almost a heaven. Kindly words, sympathizing attentions, watchfulness against wounding men's sensibilities—these cost very little, they are priceless in value. Are they not the staple, almost, of our daily happiness? From hour to hour, from moment to moment, we are supported, blest, by small kindnesses—F. W. Robertson.

LAW BREAKERS OR LAW MAKERS?

One of the principal reasons for the growing contempt for law in this country is, the manner in which the laws themselves are being administered. Many of those having their enforcement in charge have the bad habit of setting themselves up as lawmakers. Altogether too often their interpretations of the meaning of a given statute are clearly at variance with the plain letter of the law itself. Here, for instance, is a striking illustration:

As you will recall, the Federal Antinarcotic Law states that a record of narcotic drugs dispensed must be kept by the physician, dentist or veterinary surgeon, "except such as may be dispensed or distributed to a patient upon whom such physician, dentist or veterinary surgeon shall personally attend."

The Commissioner of Internal Revenue first made the ruling that the word "attend" meant to "visit." Therefore, if a patient comes to a doctor's office, a record must be kept of all narcotic drugs given or administered to him, because in such an event the doctor is not making a "visit."

Such a ruling, from the standpoint of common sense and of the ordinary meaning of the English language, is absurd. It placed a great burden upon dentists, oculists, and others using cocaine and other similar drugs in large quantities in office practice. Evidently practitioners of this type made their opinions known in a rather forcible way. The result was, the following ruling, which we reprint from *Treasury Decisions*, March 11, 1915:

A physician or dentist who administers minute quantities of drugs, coming within the scope of this law, in his office may keep a record of the date

when a stock solution is made and the date when such stock solution is exhausted without keeping a record of the name and address of each patient to whom such drugs are administered. This plan will be allowed, however, only in cases of those physicians and dentists who use minute quantities of these drugs, such as oculists, aurists, and other specialists; but, where a physician engaged in a general practice otherwise administers such drugs, it will be necessary for him to keep a record of the name and address of the patient, of all drugs dispensed, distributed, or administered in his office, and of such drugs left with a patient to be taken in his absence. Only such drugs as are personally administered by a physician to a patient when away from his office are exempt from record.

Now, what does all this mean? Simply this: that there is one kind of law for the general practitioner, and another kind of law for oculists and other specialists. It means also that men who use large quantities of cocaine in office practice are practically exempt from record requirements; while, on the other hand, those who use *small* quantities, not requiring the preparation of stock solutions, must keep a record of every drop of cocaine solution or other local anesthetic which they administer, no matter what the conditions under which the drug may be used.

It seems plain that the Commissioner of Internal Revenue has *himself* created a form of law which, in its very essence, is *unconstitutional*. To be constitutional, as every man knows, the law must treat all men alike. We would respectfully inquire whether the Commissioner's "law" does this.

Unfortunately, the general practitioners, and especially the country doctors, including the 75,000 to 80,000 physicians who dispense their own remedies, have no representatives in Washington looking after their interests.

Flowers seem intended for the solace of ordinary humanity. Children love them; quiet, tender, contented, ordinary people love them as they grow; luxurious and disorderly people rejoice in them gathered. They are the cottager's treasure; and in the crowded town, mark, as with a little broken fragment of rainbow, the windows of the workers in whose heart rests the covenant of peace.—John Ruskin.

SOME EMETINE HISTORY

That the remarkable results recently obtained from the use of emetine never could have been secured with ipecacuanha, is certain. Four centuries after the introduction of this root as a specific for dysentery, it had not yet established its place, except as one of a number of alleged remedies for that malady. Nor could it ever have established itself in a higher position; for, only by being

dosed and administered, so as to avoid emesis, could its remedial powers be utilized in dysentery. And this required the extraction of the alkaloid in chemical purity.

"But," some ask, "why did not you alkaloidists discover these virtues, when you were exploiting the pure alkaloids so loudly? Why wait for outsiders to make a discovery that was precisely along the line of your work?"

This is the answer: It was not possible to limit the use of emetine to the amebic variety of dysentery until the latter had been differentiated from the bacillary form. But, to the extent that the pathologists had afforded light, we had progressed with the employment of emetine.

In "The Treatment of the Sick," published in 1897, we read, on page 127:

"In tropical, epidemic, and all severe forms of dysentery, the ipecacuanha-treatment has proved efficient. One dram of the fluid-extract or of the powder, with just enough water to wet it, is to be taken without any further water or other diluent. The patient must then be perfectly quiet for five minutes at least; and the dose is not apt to be vomited. If it comes up, a similar dose should be given at once, and repeated until vomiting ceases. This is to be repeated every twelve hours, until the characteristic ipecacuanha stools appear; when the fever, tenesmus, and other symptoms will have been greatly ameliorated."

On page 128, Castro, the great Portuguese alkaloidist, is quoted as using the expression, "emetine for the parasitic element."

In the "Manual of Treatment by Active Principles and New Remedies," published in 1893, we read, on page 127: "Dysentery: Emetine for acute forms, tropical, epidemic or malarial; for children with nausea and fetid, unhealthy stools, greenish, bloody mucus." That comes as close as our knowledge that time permitted.

"The Textbook of Alkaloidal Therapeutics," published in 1904, says, on page 216: "In dysenteries of the graver type, tropical, *foudroyant*, it [emetine] is a specific. Given in doses of a grain, with every precaution to prevent vomiting, emetine exerts a degree of control over this malady not approached by any other remedy. The patient should be prepared for the night, in bed, and then take the dose in tablets, which must be swallowed whole and dry, with no fluid; he then must lie perfectly quiet for half an hour, and before the expiration of this he will be asleep. When he awakes in four to eight hours, he will be markedly improved.

If the dose is vomited, it should be at once repeated. Sometimes it will be necessary first to administer a small hypodermic of morphine, to insure the retention of the emetine." Again, on page 217: "The hemostatic effect is due to the relaxation of arterial tension, and also requires nauseant or emetic doses." And further, page 219: "A. L. Blesh has sometimes succeeded in having the grain-dose retained in cases of dysentery, by first partly anesthetizing the stomach with a single large dose of cocaine."

These extracts suffice to show that the merits of emetine in dysentery were fully recognized by the students of active principles long before the discovery of the entameba hystolytica permitted of its more direct utilization in the cases coming under this remedy. At present we know that the alkaloid acts more quickly and certainly when given subcutaneously, thereby avoiding the gastric irritation and nausea following oral administration. Indeed, it is the realization of this fact, that the full effects of emetine can be developed, without nausea, vomiting, or alimentary irritation, when it is given subcutaneously, that makes Rogers' work revolutionary.

Emetine, however, is only one of a large number of active principles that have been similarly studied. The enterprising clinician who turns to the alkaloidal books will find a genuine therapeutic gold-mine awaiting him there.

We have here evidence:

1. That the alkaloidists recognized the control exerted by ipecacuanha over certain forms of dysentery. These were not known at the time to depend upon the ameba, but since that time they have been traced to that parasite, and the explanation has been furnished of a radical difference which long ago was recognized, clinically, by the alkaloidists.

2. These men saw that the effects of ipecac were exerted despite its emetic action, which was to be prevented in order to secure the curative influence. Moreover, it had been shown in India that ipecac deprived of emetine did not exert the desired influence over dysentery.

3. The work had been carried as far as the developments of the time made possible. The best available ipecac preparation then was Merck's amorphous emetin, which contained about one-twelfth its weight of the alkaloid. Laboratory experiments had established the differences between emetine and cephaeline; but unfortunately here they stopped, and left to others the duty of sup-

plying the medical and pharmaceutical professions with chemically pure alkaloids.

While the alkaloidists here evidently lost an opportunity, for this the medical profession is to blame. Had they realized the scientific importance of the alkaloidal movement and supported and encouraged it properly, there would have been no such lapse. Unfortunately, they were led to see only the commercial phase of the matter, and did not apprehend the tremendous significance of the movement inaugurated by Burggraeve. When this appreciation comes, we shall see a rush for the alkaloidal textbooks on "Therapeutics" and "Practice" that will recall the opening of the Klondike gold fields—with results far outvaluing any metalliferous discovery.

Is emetine the most valuable of the nuggets brought to light by the alkaloidists?

It is to laugh!

There shall never be one lost good; what was shall be as before,

The evil is naught, is nil, is silence implying sound;
What was good shall be good, with for evil so much good more,

On earth the broken arc, in Heaven the perfect round.

—Robert Browning.

THE PROBLEM OF COLLECTIONS

Every physician should read carefully Mr. Brush's article upon collections printed elsewhere in this number. It will be followed by other papers upon the same subject, all of which, we hope, may draw out extended comment and free discussion.

We are particularly anxious to learn of the "systems" of those of the profession who are making good financially. Also we want to learn of the problems and difficulties which are troubling physicians in different sections of the country. Please write us freely on this subject, and if you can contribute anything to help another brother to financial success, do this with the same freedom you have always exercised in these columns in helping us all to therapeutic success.

We want samples of your statements and bill-forms; and if you have a "follow-up" system for poor-pay patients, or any unique schemes or plans for collection-service or book-keeping, let us have them also.

Now we are getting "right down to brass tacks." Help us, please, all you can. It is our purpose to pay more attention to the doctor's business problems, but in order to make this work effective it is essential that every one should do his share. What will *you* do?

Leading Articles

How a Great University Cares for Its 5000 Students

The Work of the Medical Staff of the University of Wisconsin

By MARVIN W. WALLACH, Madison, Wisconsin

"SCARLET-FEVER Closes Western College" was a headline appearing recently in many newspapers of the United States. The article told of students leaving school in a panic, spreading the disease in railroad trains, on their way home, and carrying it to distant corners of the state. What else could the president of the institution have done, when with every hour the telephone tinkled and a new case was reported? The worst handicap in the efforts to check the epidemic was ignorance of the source. It is in this and similar ways that 3,000,000 people become ill in our country each year, according to Professor Irving Fisher, of Yale University.

About a year ago the University of Wisconsin was threatened by the sudden breaking out among the student body of eight cases of virulent diphtheria. The University's board of health tacticians immediately sent the eight victims to the isolation-hospital and endeavored to discover where they caught the disease. Entrance health-records showed them to be persons of unusual vitality; they had attended no common classes, social affairs, or meeting-places, and lived relatively wide apart. Where, then, was the source? At last they were interrogated as to their boarding-places, and it was learned that all ate at one large dining-hall; not at the same tables, however. Thereupon the waiters were examined and cultures from their throats were made. One of the lot, a healthy man, turned out to be a diphtheria-carrier. Although in the best of health himself, he was hurried to the isolation-hospital, and no further cases of diphtheria occurred.

In the same institution, an epidemic of boils was traced to some wrestling-mats in the gymnasium. The clinical department caused

the infected mats to be destroyed, and thus for a time the common welfare was guarded.

These examples serve to illustrate how the spread of contagious and infectious diseases really can be prevented by the effective application of modern medical knowledge. At the University of Wisconsin, physicians are employed as are the proverbial Chinese doctors—to keep their charges well. The interest of the medical advisers begins on the day a student enters college.

The Physical Test on Entrance

Let us take the case of a new student—whom we will call David Shell—entering Wisconsin University as a freshman. After registering, our newcomer is handed an innocent-looking card reading, "Report for medical examination at 10 o'clock tomorrow." At the hour named, he presents himself, in company with some newly formed acquaintances, and is directed by a young lady, who is sitting before a lot of filing-cabinets, to walk "to the end of the hall, downstairs, and turn to the right." They enter the room indicated.

"Everybody strip!" is the order, and David strips.

Provided with coversheets and soft slippers, the young men are directed to a nearly-Turkish bathroom and told to wait their turn. David's name is called, and he is ordered to go into room No. 1. Here a young doctor asks him many intensely personal questions, prying open his mouth, picking his teeth, scraping his tongue, inspecting his body, and pummeling him all over. But this is not the end. On into chamber No. 2 goes the ambitious freshman, and here he is kneaded and hammered, made to punch a registering device, told to squeeze a grip-



Fig. 1. The Clinical Building, where the disease-fighters have their headquarters.

recorder, and invited to show how high a column of water he can raise by expelling his breath.

Yet the tests, which have been more thorough than those for a life-insurance examination, are not ended! Before an elaborate eye-testing device, he is shown a bewildering array of letters and figures; until at last the examiner comes to the conclusion that his vision is normal.

This is the famous eugenic test each entrant passes before courting Dame Education at this university; nevertheless, not more than four or five out of the vast intellectual body applying for admission are rejected.

What Is Accomplished?

What do these medical examinations accomplish? They fortify these new students with advice about their health and habits of life that will increase the efficiency of their academic efforts. After a student has entered, he may be admonished to return from time to time for examination, or may be invited to ask freely about the smallest trifle, there being no charge for consultation or treatment. Even minor operations are performed, although, of course, in more serious ailments, they are expected to consult an outside physician. Arrangements with the Madison General Hospital provide for domiciliary treatment, and the most favorable conditions for healing are procured, because the students have confidence in the adviser's freedom from economic pressure.

Strange as it may seem, the real reason for establishing the medical-inspection bureau was not so much that the management entertained a paternalistic regard for the students' health as to increase their "dollars-and-cents" efficiency. Every day of sickness averted means, to a student, several dollars saved, without counting the irreparable loss and the straining to catch up. Teachers all know how one uninterested pupil causes a drag in the recitation, while reports on class laggards often disclose a physical reason for the listless attitude.

Suppose David slumps after the first semester and wants to know what is wrong. He is warned that late hours, excessive smoking, and bolting of meals makes him dull. Not, perhaps, that any one of these indulgences is the cause, but the three in conjunction serve to impair his work. In fact, the majority of the doctors' routine is to advise students how best to order their lives. Once in a while, one known as a hypochondriac wofully enters the consultation room, fancying that something is wrong with his "digestive carburetors."

As the doctors have no interest in making money out of the patient, they give him



Fig. 2. The student undergoing the entrance physical examination.

a talk straight from the shoulder about his imaginary ills.

Research Work on the Student's Health

However, individual welfare is not the sole concern, and, so, each doctor of the university inspection-plant spends part of the year as a teacher, and part of the time in research work on student-health. Moreover, these "super" doctors control the rooming-houses, and particularly the toilets, halls, and recitation-rooms frequented by the student body. Beside, when contagious diseases are rife, war-measures can be instituted to squelch an epidemic. Through this mechanism, the spread of skin diseases had been traced to swimming-pools at Wisconsin University. Also, after many experiments, a bleaching powder was devised that will kill deleterious germs in the tanks. Cleaning gymnasium-suits and towels, likewise, is handled in a sanitary manner.

When the unique Badger University Exposition was held, in order that each department might show what it had done to entitle it to a place on the scroll of progress, the clinical research-people prepared a series of charts on vital health statistics. Comparing student illness by departments, the College of Agriculture showed the highest percentage at seasons; yet, running throughout the year, the engineers led, because of accidents in the shops. The curve for law students was low, as this is a postgraduate course and the mature men have become accustomed to Madison and student-life. Tonsillitis, bronchitis, and inflamed eyes were found to be exceedingly "popular" diseases through February and March; while November was the glorious month of football-sprains, bruises, and wounds.

Another graphic chart, which compared men and women in average health, showed that the males suffer from a greater array of maladies, owing to a lack of personal hygiene and to a more active life, which invites infections and accidents. Thanksgiving day produced horrible ravages! Immediately thereafter the clinical department announced an interesting increase in the number of appendicitis-cases. In a different way, small-pox outbreaks are guarded against by listing persons unvaccinated, and sometimes, 25

percent of the unprotected students in time of danger are at once advised how to gain immunity.

Between 85 and 95 percent of the whole registration come for advice at least once during the semester; while about 200 men are given corrective gymnastics under Doctor Elsom, of the department of physical education.

One-fifth of the men are excused from taking the strenuous military drill, because of abnormal conditions; while another one-fifth have constitutional defects more or less serious; these defects not incapacitating for study, but, by the doctor's advice, their courses are eased in minor details. Thus,

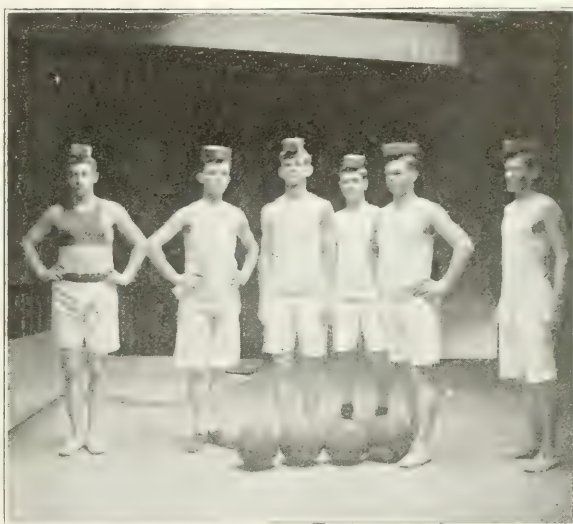


Fig. 3 Correcting round shoulders by carrying bricks on the head.

suppose a student has some heart lesion; then he or she is given an arrangement of studies that will obviate the necessity of climbing the hill to the main hall oftener than once a day, or will be told to walk around the hill in getting from one college to another.

The Volume of Work, and What It Costs

Last year the doctors served approximately 15,000 clinical visitors, though many of these returned for the second time or for continuous treatment. On the average, 159 patients a day are handled, including the football season; for, from the time a man enters until he leaves in any major sport, he is under the directive supervision of the clinical department. Judging from the private opinion of several athletes, the department seems to take little glory in anyone dying for the school!



Figs. 4 and 5. Weak heart requires special exercises, such as those shown in the upper photograph, together with rest at the moment of fatigue, as shown in the lower picture.

And the cost? Well, last year it cost about \$25,000 to run the clinic, or \$5.00 per capita. That includes the class-rooms downstairs, the sterilizing-room, and the laboratory for making cultures and raising "bugs," to aid in the delicate Wassermann tests for syphilis.

The University of Pennsylvania recently studied our Wisconsin methods in this vital health-department. Cornell also has seen the great possibilities in striving, for the laudable purpose of giving students the same care as do parents at home. In Cornell's infirmary, last year, the number of patients totaled 1053, of whom 140 were women; and consultations numbered 10,877, including 380 house-visits. In operation, the plan has

been considerably cheaper than at Wisconsin; but, at the same time, less has been attempted.

The University of California, at Berkeley, and the University of Wisconsin, at Madison, have worked out almost identical schemes. Before the School Hygiene Congress, Doctor Reinhardt, of the Pacific Coast institution, announced that "illness, and not idleness, was the main factor in undergraduate delinquency." At the California institution, for many years the students' guild provided hospital service.

In 1907, the University of California established an infirmary with 40 beds and 7 physicians. Since then, not a single epidemic of infectious disease has occurred among the students. The entire cost for 1912-1913

was \$25,436.05, covered by a student-fee of \$4.00, and used partly for sanitary gymnasium-lockers and swimming-tanks. Here it was also found advisable to use a germicide in the aquatic tanks, and then the water is re-utilized for irrigation and fire protection. In six months, there were 15,000 dispensary visits, 296 bed-patients, 66 operations, 589 vaccinations, and 620 typhoid inoculations. "Perhaps there does not exist at the present time," suggested Doctor Reinhardt, "a better example of what can be done for the maintenance of health in a large group at a small cost per capita than the California infirmary and allied activities."

Such are the far-reaching experiments three great institutions are conducting, and which, eventually, may lead us back to the scheme of the ancient Greeks, with state-employed physicians. August Boeck wrote a remarkable book, in the closing years of the eighteenth century, entitled, "Public Economy of Athens." In



Fig. 6. Walking on bricks to teach muscular coordination.

this, he shows that our advocates of *materia medica* have not traveled far when we review some of their practices. Even the old Greek doctor wrote his prescriptions, not in dog Latin, but in dog Doric. He was not accounted an educated man, unless he had

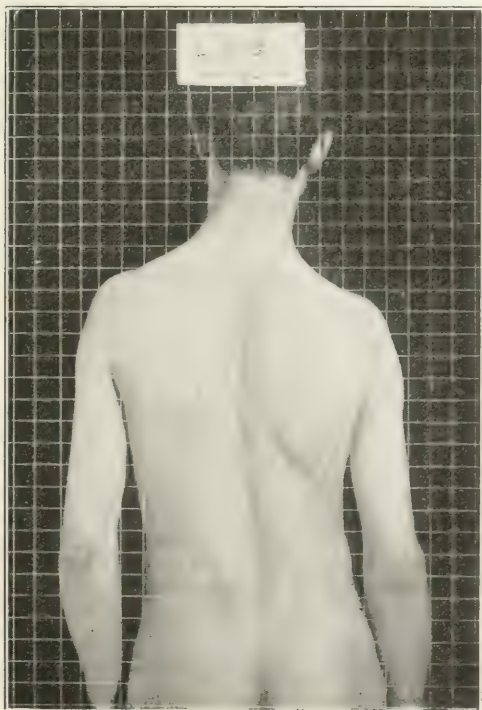


Fig. 7. Spinal curvature in a student, delineated by cross-ruled photograph.

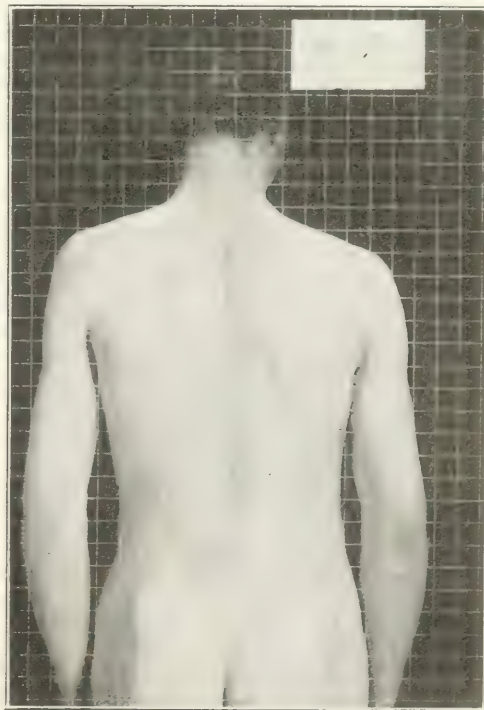


Fig. 8. Cross-ruled photograph to demonstrate presence or absence of spinal curvature.

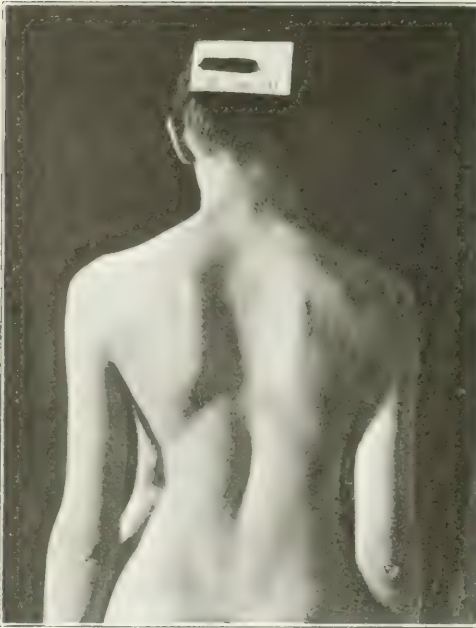


Fig. 9. Correcting spinal curvature. This photograph was taken Oct. 20, 1911.



Fig. 10. Same student shown in Fig. 9, photograph taken Nov. 25, 1911.

finished himself in Ephesus or Miletus, and could write his advice in the foreign Dorian Greek.

But to return to the present—perhaps it is within the realm of possibility that the state may eventually do for all its citizens, in the matter of health, what some of our great universities are already doing for their

students. Can anyone doubt that the efficiency of our people would be enormously increased if every individual, from childhood to old age, could be taught “how to live”—how to adjust his physical resources to the demands which our complex modern civilization is laying upon him—and upon every one of us?

TO AMERICA*

By JOSEPH R. TAYLOR

I.

What names and thoughts shall stead thee in this hour

When issues, like an armed man, draw near:
Names allied not to fury or to fear,
Thoughts higher than the simple thought of power?
What wisdom lesson thee to pluck the flower
Of our land's honor from this nettle here—
Making the right in majesty appear,
Banning the clouds that ominously lower?

Ere yet the questions come, the answers wait:
Turn thought where'er she may, or feeling grope,
Two figures clearly, holily arise:
They knew the hard decision big with fate,
They saw behind it all the changeless hope—
Lincoln the patient, Washington the wise!

*Published as an editorial in *The Chicago Herald*.

II.

Not as the war-mad nations, drunk and wild
With the bitter wine of their own fury, seek
The path to go, the word true men must speak
For injured right and justice sore defiled!
Sober with strength, by passion unbeguiled—
The future big, the tyrannous instant weak—
In threats not stern, for justice not too meek,
Confront the question—Freedom's best loved child!

So shalt thou find thy noblest gesture, find
The imperial word based on imperial right,
And the world's conscience shall attest the fact;
Nay, thou shalt be the trumpet of mankind,
And thou shalt see, however dark the night,
The path shine clear from righteous word to Act!

The Hygienic Accessories to Therapeutics

By BOARDMAN REED, M. D., Alhambra, California

THE people who in the past reached a high old age nearly all lived temperately and hygienically in most ways. They avoided stimulants and narcotics, or else were very sparing in their use, and especially, since most of them were poor, limited themselves to a simple diet, which consisted of but few articles, was moderate in quantity, and was taken at regular and not too frequent intervals; besides, during the active period of their lives, they generally took a sufficiency of moderate daily exercise in the open air. In fact, with the help of systematic exercise and simple diet alone, some of them who at the age of 40 or 50 were chronic dyspeptic, anemic weaklings were restored to normal tone and thereafter lived in good health to old age.

Improper Diet Causes Much Disease

Leading medical authorities everywhere now recognize and teach that dietetic excesses and a deficiency of physical exercise are the principal causes of the rapidly increasing prevalence of diseases of the heart, arteries, and kidneys, with their numerous complicating disorders. It is commonly known that very many of the affections of the alimentary tract, the liver, skin, joints, and the nervous system are attributable to the same faults, while even tuberculosis finds numerous victims who would have escaped the infection but for the depressing and health-lowering consequences of their lazy and self-indulgent habits.

These facts should lead us not to depend too exclusively upon drugs, or even drugs in association with the usual mechanical measures, alone, in treating disease, especially in its more chronic forms. Every chronic sufferer has long been guilty of one or more serious hygienic faults, which must be radically reformed before the most appropriate of our drug remedies can exert their curative effects.

Whatever an Eddyite healer might do, no educated medical man ever would try to cure a diabetic without first correcting his diet as to starch and sugar, while he was eating excessively and taking little or no exercise. Any physician would fail dismally who should attempt to heal a peptic ulcer, gastric or duodenal, while the patient persisted in using such irritants as mustard,

pepper or any of the spices or stronger condiments or acids or in eating much meat; and so with anyone who should essay to treat a case of Bright's disease by means of remedies without beginning by a reform of the patient's diet and whole course of living—his baths, periods of rest, exercise, and so on.

How a Colored Bishop Dined

I once, many years ago, ordered a milk diet* for a corpulent colored bishop who had nephritis and evidently had been grossly overfed. Some time later I found him enjoying a generous repast of ice-cream and cake. He explained that he had been taking regularly the four quarts of milk ordered and did not suppose that a little dessert extra would hurt him.

In the days of the patriarchs, when people ate to live—and lived simply—there were, probably, no fancy cooks, as at present, able to concoct such toothsome desserts that no gourmand could resist the temptation to partake generously of them, no matter how overloaded his stomach already had become. Now it is very different; nearly everybody who has the price overeats, and many, not being obliged to work, take practically no muscular exercise. The present almost universal abuse of condiments produces very generally an abnormally large appetite, so that this is no longer a reliable guide as to the amount of nourishment really required, and the sight and odor of a rich, fragrant dessert easily overtempts most persons often after they have eaten more than enough. The consequence is that the majority of our chronic diseases are the direct or indirect results of overeating and underexercising combined, although bodily exercise renders much more food both necessary and safe. Then, sedentary people ordinarily drink too little of water or any fluid, their beverages being largely limited to tea and coffee, taken with their meals and too often made to do the work of the saliva for washing down the half-chewed boluses of food. Even the lighter tart wines, when used in strict moderation, possibly do less mischief in the aggregate. It fortunately no longer is fashionable to indulge inordinately in the alcoholics, and it now is quite vulgar to get drunk; but there

*That was before the publication of the book on diabetes by von Noorden, who condemns the milk diet in such cases.

still are plenty of tea-topers, especially among the women, with whom it is *de riguer* to provide tea with sweets for their afternoon-callers and to expect the same on their return calls.

Remove the Cause—Gluttony!

The indispensable prerequisite in therapeutics is, to remove the cause whenever possible, but we have no drugs that can cure sloth and gluttony. Discipline can do much to overcome these faults in childhood and youth, and what the parents have left undone must devolve later upon the family physician. The proper remedies are obvious, and the doctors should only need to have their attention called to them.

The successful physician now ought to be a hygienist as well as a good therapist. He should see to it that his sedentary patients are not being tempted either by their own previous selfindulgent habits or by their wives and cooks, despite diet-tables and good

resolutions, to bite off more than they can chew or actually do chew thoroughly, and he should ascertain by the appropriate tests whether such patients are not eating more than they can digest or possibly even digesting more than they are able to assimilate and utilize in their activities. It is the excess of food which lingers undigested in the intestines or, even though digested in whole or in part, that clogs the emunctories and breeds a host of derangements, including obesity, and finally leads to disease and premature death.

It may be unfashionable and probably less profitable to order a restricted diet and exercise for wealthy patients who are indolent and overfed, but it would do them more good than any amount of medicine alone; and to the glory of our profession be it said, that it is the only one whose honest members are constantly giving advice for the good of their patrons which takes money out of their own pockets.

The Relation Between Dementia Præcox and Certain Toxic Amines

By BAYARD HOLMES, M. D., Chicago, Illinois

THE great importance of infection and messmatism, or parasitism, which exists in the flora and fauna of the intestinal tract, finds its explanation in the physiological activity of the excretions, or byproducts, of these organisms. The *bothriocephalus latus* is not as dangerous while alive as when it is dead; some toxic elements are derived from the dead worm that are more destructive to the host than those which the live worm furnishes.

One of the most toxic and therefore clinically most interesting products of bacterial parasitism is found in the amines, resulting from the breaking-down of proteins, through their consumption by bacteria, and this suggests that the adaptation and limitation of microorganisms to one special form of nutriment furnishes an inspiring subject for speculative and experimental evolution.

The amines are known both in gaseous and in liquid condition; some are soluble and some insoluble in water; some are of quite simple molecular form, while others are very complicated and highly evolved. But we are interested in their molecular makeup only so far as structure determines physiologic action or pathologic potency.

The most toxic amines are those derived from phenylalanine, tyrosine, tryptophane, and histidine as the result of bacterial growth in the intestinal contents, of which they form a considerable part. While the bacillus aminophilus does not, in the absence of glucose and other more favorable nutrients, attack these bases in an acid medium in the intestine, this microbe produces betaiminazolyethylamine in a medium containing 0.3 percent lactic acid. (Berthelot and Bertrand, 1913.) This most poisonous amine is not produced when rats are fed upon food containing the bacillus aminophilus alone, nor when fed on food containing the proteus vulgaris alone; but, if rats are fed on food containing both these organisms, they are attacked by diarrhea and die in from four to eight days. The contents of the intestines of the dead rats are rich in betaiminazolyethylamine.

The liver is the eliminator of all such toxic amines, even the isolated liver of an animal has this power. The fatal dose of a toxic amine is first determined for, say, a rabbit. Next, double or even quadruple of the dose thus found is passed through an isolated

liver of a rabbit, and then a rabbit of the same weight is injected with this. Ewins and Laidlow have shown that p-hydroxyphenylethylamine is transformed, by perfusion through an isolated liver, into p-hydroxyphenyl acetic acid. A toxic dose injected into the vein of an extremity not only is harmless when injected into the portal vein, but the dose may be many times increased before it produces the slightest symptom. (Oehme, *Arch. f. exp. Path. u. Phar.*, 1913, LXXII, p. 76.)

Probably most of the toxic amines produced in the intestinal tract are destroyed in the liver, but conditions may arise that limit or arrest this hepatic function. Such an error Mellanby (*Lancet*, 1911 (2), p. 8) has connected with that strange disease of youth known as cyclic vomiting, believing it to be the escape of betaminazolyethylamine through the liver.

Breath and Skin Odor in Dementia Præcox

Anyone who has seen the acute onset of dementia præcox or even one of the relapses can not fail to have noticed the acetone-breath, the aromatic odor of perspiration, and the novel orange blossom odor of the urine at such a time. Thus is dementia præcox similar to cyclic vomiting.

In connection with the large number of amines that result from intestinal putrefaction, there are some reliable observations on the clinical side that are supported by biochemical studies. Metchnikoff's sour-milk treatment, the grape-cure, the cheese-cure, fasting-cures, and many other analogous treatments are supported by sound chemical findings. The yeast-cells consume most of the toxic amines (Ehrlich, Pischimuka, in *Bericht. d. Deut. Chem. Gesell.*, 1912, XLV, p. 1006) and reduce them to harmless alcohols, while laxatives carry them away and agar entangles them.

There exists an interesting relation between the pressor action of the aromatic amines and their toxicity. The most actively toxic amines are the cyclic ones with a side chain of two or more carbon atoms. When, for example, the side chain of hordenine is lengthened from three carbon atoms to four or five carbon atoms, pressor action diminishes and the toxicity increases tenfold. (von Braun and Deutsch, *Ber. d. Deut. Chem. Gesell.*, 1912, XLV, p. 2504.)

In dementia præcox, the toxin has a depressor action; for, the blood pressure is always below normal and can not be raised by adrenalin injections.

The monamines produce effects similar to those caused by stimulation of the sympathetic nervous system; they have, therefore, been termed sympathomimetic. Adrenalin is the most powerful; p-hydroxyphenylethylamine, phenylethylamine, isoamylamine, and isobutylamine follow in declining order. As the amine groups rise, the pressor action increases until hexylamines are reached and then it declines in the heptylamines, and still more in the octylamines.

A Comparison with Adrenalin

The introduction of the benzene-ring in phenylethylamine greatly increases the pressor action. This base has the same carbon skeleton as that of adrenalin! The several toxic amines produce many symptoms of like effects. Thus p-hydroxyphenylethylamine has one-twentieth the pressor potency of adrenalin, and in doses of 1 or 2 milligrams it produces a sudden rise of arterial pressure, of a very transitory nature, the nonpregnant cat's uterus is relaxed, the pregnant cat's uterus is contracted, and the salivary secretion is greatly increased by it. When applied to mucous surfaces, it causes very little constriction of blood-vessels. In even enormous doses (100 mgm.), it produced no glycosuria in a cat. (Dale and Dixon, *Jour. Physiol.*, 1909, XXXIX, p. 25.)

In dementia præcox, at certain stages, salivation is a distressing symptom. We are uncertain, from lack of any observation, what relation, in this disease, salivation has to blood pressure or to the presence of glycaemia.

The relation of the pressor toxic amines to high blood pressure and arteriosclerosis has long been suspected, but recently the biochemists have attacked the problem.

Since tyrosine is present in the intestinal tract, and inasmuch as fecal bacteria produce p-hydroxyphenylethylamine when grown (in the tube) on such media, this amine has been the one selected for study by many investigators. It has the greatest pressor potency and at the same time is the most toxic. Up to the present, little has been accomplished.

This substance is also found in ergot; however, the presumption of some investigators that it is the most important constituent of ergot has been shown to be fallacious by Guggenheim. (*Ther. Monats.*, 1912, XXVI, p. 795.)

The diamines furnish bases of the most complex and paradoxical physiologic properties. Betaminazolyethylamine has received the most thorough investigation. This sub-

stance is also present in ergot. It has a depressor action, but a remarkably strong contractive action upon the isolated nonpregnant uterus of the cat. When perfused with Ringer's solution to which 1-25,000,000th (or even 1-250,000,000th) of betaminazolyethylamine has been added, the nonpregnant isolated uterus is contracted. *The muscular coats of the bronchioles, however, are the most sensitive to this base.* Large guinea-pigs are killed in a few minutes by an injection of 0.5 mg. of betaminazolyethylamine, and they die by asphyxia, the result of the contraction of the bronchioles.

When this action was studied in a surviving guinea-pig's lung, it was found that the contraction of the bronchioles is permanently abolished by adrenalin, which is not the case in the intact animal. (Baehr and Pick, *Arch. f. exp. Path. u. Phar.*, 1913, LXXIV, p. 41.) This phenomenon has some analogy to anaphylactic shock, in which death occurs in much the same way as it does from Witte's peptone. The lungs are found permanently distended. Poplieski thinks that the betaminazolyethylamine acts by liberating a hypothetical vasodilatin. It also may be related to the "depressor substance" which Abelous and Bardier found in the urine and termed urohypotensine.

Poisoning That Suggests Anaphylaxis

The striking resemblance of betaminazolyethylamine poisoning to anaphylactic shock can be seen, not only in the condition of the lungs, but also in the fall of the body-temperature characteristic of milder degrees of shock. (Dale and Laidlow, 1911.) This base also is nonpoisonous to dogs, and dogs rarely exhibit anaphylactic phenomena. Pfeiffer (*Zeit. f. Im. u. Exp. Ther.*, 1911, p. 133) thinks that in the final solution of the anaphylaxis-problem betaminazolyethylamine will surely be a very important factor.

The interference of adrenalin with the muscle-contracting action of betaminazolyethylamine is one of the interference-phenomena that are so pregnant with therapeutic application as well as toxicologic studies in this borderland of biochemistry. If we show, in a scheme of four tests, the reactions of only three of the bases with which we are best acquainted, the reader will see at a glance the relation between pressor potency and the three muscle reactions, which in a larger comparison of a greater number of tests becomes confusing to any but the biochemic investigator.

COMPARISON OF PRESSOR POTENCY AND MUSCLE REACTIONS

	Raises blood pressure	Contracts peripheral blood-vessel	Contracts ox's coronary artery	Contracts non-pregnant uterus of cat
Adrenalin	+	+	—	—
P-hydroxyphenylethylamine	+	+	+	—
Betaminazolyethylamine	—	+	+	+

In addition to these remarkable actions, it must be noted that the pulmonary arterioles are constricted by betaminazolyethylamine and the *pulmonary* blood pressure is raised.

Take into consideration now the similar action of ergot and the fact that ergot contains this base, and the solution of that anomaly is approached. Betaminazolyethylamine has a stimulating action upon the salivary glands, and so it has on the pancreas, though in a less degree; but, it is not like the action of secretine, because it is abolished by a small dose of atropine.

For our argument, the source of this base showing biochemical reactions so like the symptoms of dementia præcox is an important factor.

Since the first production of betaminazolyethylamine ($C_8H_9N_3$), or 4-betaminoethylglyoxaline, by Windaus and Vogt, (*Ber. d. Deut. Chem. Gesell.*, 1907, LXX, p. 3691), by synthesis, it has been obtained from many sources, and in all of which it probably results from bacterial action. In the mucosa of the intestine, it was found by Barges and Dale (1911), who abstracted it from the crude solution of secretine; to which it imparted a depressant action. In the intestinal wall, its formation is due, probably, to a bacillus, isolated by Mellanby and Twort (*Jour. Physiol.*, 1912, XLV, p. 53) capable of converting histidine into betaminazolyethylamine. This base has been isolated from putrid soy-beans by Yoshimura, who found an analogous base in the Japanese beverage called tamari-shoyu. (*Biochem. Zeit.*, 1910, XVIII, p. 16.)

The recognition of the betaminazolyethylamine for clinical purposes is sometimes quite easy. The stool, rendered alkaline with sodium carbonate, is shaken up with three ounces of ether. The stool must not contain any oil and the patient should not have received any laxative or cathartic except an aperient water or saline. If the stool is very solid it will be necessary to add sufficient

water to break it up. The shaking must continue for an hour or two and the ether must then be pipetted off and filtered through dry filter paper. It is then placed in a shallow dish, and evaporated at room temperature.

If the residue left after evaporation of the ether contains as much as one part in a thousand of its bulk of betaiminazolylethylamine, it may be recognized by a simple physiologic test. A good sized, and perfectly clean, new steel pen is dipped in this residue and one or two scratches, not deep enough to draw blood, are made up and down the forearm. In a very short time large wheals or herpes rise up along the scratch, sometimes a millimeter high and the width of half a centimeter or more. These herpes reach their acme in about five minutes, are red and itch fiercely,

and disappear after a half hour at most. (Eppinger and Gutmann, *Zeit. f. klin. Med.*, 1913, 78, p. 210-12.) This test has been successful in urticaria and asthma from betaiminazolylethylamine intoxication. (See also Mutch, *Quart. Jour. Med.*, July, 1914, 7, p. 433.)

Thus we see that the toxin that produces symptoms most like those of dementia præcox originates from the bacterial action of a special microorganism upon a particular protein, under special conditions.

One would be led, then, to further researches on the chemistry of the intestinal tract, in an effort to solve this darkest and this saddest problem that confronts our profession and the forty-eight boards of administration of this, our United States—the problem of dementia præcox.

The Land of the Montezumas

Impressions of Twenty-four Years of Professional Life in Mexico

By G. E. BROOKS, M. D., Las Cruces, New Mexico

LATE one October afternoon in the year 1889, a slow mixed train, on a narrow-gauge railroad, moved leisurely out from Nuevo Laredo, Mexico. The wide, shallow river that joins two of the great republics of the world had been crossed; the stars-and-stripes were left beyond the Rio Grande, the red, white and green floated idly from the custom-house, the musical language of Cervantes fell on my ear. I was in a foreign country.

I looked, with curious interest, upon a people graceful, courteous, languid, yet, withal very talkative. From the car-window, one could see, standing beside low-thatched cottages, dark women, *rebosas* wound gracefully about their heads, their little ones held in the attitude of a Raphael Madonna. Many of the houses, as they came into view, were of Pompeian color, some a dull-blue, the exact shade found on the ornaments of the Egyptian mummies. Everywhere there was something that bespoke a mysterious past. Already the country was teeming with wonders. I looked without at the various features of interest, and within the coach at the still more interesting people. Soon "las Sierras" were dimly seen through the purple mist. By and by the talking became less excitative, the gesticulations

more reposeful, until at last, like tired children, my fellow travelers drowsed away into sleep.

I sat there, feeling very much a stranger in a strange land. I wondered what would be the relationship of a foreign "medico" in this country; wondered whether *ars medica*, as understood in the United States, would have aught to offer to a people who looked as though they would respond to other influences, if true, and give back goodness for good. My thoughts were so filled that I slept not and felt the long-drawnout journey all too brief when, at the end of thirteen hours, I heard the porter's call of "Monter-r-rey," sounded with the trilled r of the Italian.

It was truly a foreign country, and all about me seemed strange and incomprehensible.

From the slow train, the passengers were transferred to a mule-car, which in its onward trip, fairly rattled over the cobblestones, the poor beasts of burden mercilessly lashed by the callous driver. There were no "societies for the prevention of cruelty to animals" in Mexico in those days.

From Monterey, I immediately proceeded to my destination, Topo-Chico—Hot Springs—three miles distant from Monterey. It was not long that I had an office in both

places, devoting to the Monterey office certain hours each day.

Mexicans Easy to Deal With

My professional work brought me in close touch with the populace and conditions. The Mexican people are easy to deal with, if one shows kindness and proves efficiency. The conditions were more difficult to meet. Monterey, the most important city of that section, was a small, sleepy place. There were no electric lights, no paved streets, no water-works; the sanitary conditions were deplorable. Nevertheless, it possessed many attractions, and, like all the other Mexican cities, was a social center.

A few days after my arrival, I attended the inaugural ball given in honor of the Governor, just elected, or, rather, appointed by the President, Don Porfirio Diaz. The new governor was the late lamented General Bernardo Reyes, whose tragic ending occurred in Mexico City at the beginning of the "decena tragica"—ten-days' tragedy—when President Madero was deposed and murdered. Under Governor Reyes, the state of Nuevo Leon rapidly progressed, and within a few months electric lights illumined the city. That city was taking forward steps. A large smelter, built by Americans, soon was in operation. A railroad from Monterey to Tampico was built. A railroad from Eagle Pass, over Torreon, to Monterey was built later by the International Mexican Company. Some sixty days after my arrival, I was called to Mexico City, to aid in the inauguration of a hospital service on the Mexican National line, which ran from Laredo, on the Texas border, to Mexico City, the capital. Previous to that time, no provision had been made for caring for the employees during illness or in the event of accidents.

How Disease Was Fought by a Progressive Governor

Epidemics of smallpox, scarlet-fever, and yellow-fever were frequent in Monterey, as then little attention was paid to sanitation. However, after two epidemics of yellow-fever, the disease having been brought from Tampico, on the Gulf of Mexico, the authorities inaugurated a cleanout, cleanup, and keep-clean policy, supported by a rigid quarantine against Tampico. The mortality during the yellow-fever epidemic was about 35 percent, and the higher classes of the wealthy and cultured people of the city were not exempt. Gradually boards of health were established, sanitary methods enforced, and the medical

profession was trying to keep pace with the great strides made in other directions.

Meanwhile, Mexico has made marvelous improvements in every direction. Electric cars, paved streets, and cleanliness are the order of the day in the Aztec land. Epidemics have almost disappeared, spacious modern hospitals are to be found in all sections, where years ago conditions were quite different. There are many Mexican physicians and surgeons thoroughly educated in the healing art, and the National School of Medicine and Surgery, in Mexico City, has sent out men who have developed into highly competent physicians and skilful surgeons. They are performing the work formerly done by foreigners. But, these foreign physicians have been a great incentive to progress in all branches of medicine and surgery.

A Tribute to a Great American Doctor

Right here, if I were capable, I should like to pay a tribute to a distinguished and much-loved physician—an American, I mean Dr. Newell Browne, scion of an old aristocratic family of Kentucky. Doctor Browne located in Mexico, and there his clear head, strong character, and love of progress were greatly appreciated. He settled in the quaint old town Montemorelos, in the state of Nuevo Leon, situated in the semitropics. There, in that equable climate, under the bluest of skies, with the soft gulf-breezes blowing among the orange-trees, Doctor Browne went through the city, the villages, and over rough mountain-trails, on his mission of mercy—mercy, in the sense that he carried enlightenment everywhere, besides giving alms to the poor. And he made the path easier for those foreign physicians who might come after him.

Nor was this all. Doctor Browne's thought was not confined selfishly to his own profession. It was his observing eye and discerning mind that foresaw the wondrous opportunities for the "orange-belt," in the center of which lies Montemorelos. Seeing that the Mexican orange thrived there without cultivation, he concluded that every kind of citrus fruit could be grown there. Accordingly, his son-in-law, a senator when General Reyes was governor, and one of the leading and most progressive men of Mexico, Don Arnulfo Berlanga, began to plant "quinta" after "quinta" with orange-, lemon-, and grapefruit-trees.

Through his influence, a prominent orange-grower of southern California came and engaged extensively in citrus-fruit culture.

The man referred to is L. N. Stuart, recognized as one of the best authorities on the cultivation of the different varieties of oranges. Navel, Satsuma, blood-, Parson Brown, and Mediterranean-Sweet oranges grow there in such perfection that the Montemorelos oranges are fast becoming famous throughout Mexico and even the United States. Travelers declare them to be superior to the oranges of Italy, California, and Florida.

Another American physician, finding that pecans are indigenous to the soil of that region, conceived the idea of alternating orange- and pecan-trees; and now he owns a grove that promises much better profits than oranges alone. These orange- and pecan-groves have remained undisturbed by the passing armies of the revolutionists, because Montemorelos was not considered a strategic point.

Mexican Resources

While we owe so much to Mexico, I trust that we have given at least a moiety in return for all its kindness, patronage, and respect. No one can live in Mexico, if he live rightly, without loving the people; and no other country ever seems quite so interesting afterward. For Mexico, the land of sunshine and flowers, the home of hospitality and song, is an empire with the greatest possibilities on earth. Her magnificent resources are practically inexhaustible; she has mines of fabulous wealth; she owns primeval forests; in fact, the story of the riches of the republic to the south has never been told. They have been her glory, but also her misfortune.

After I had been in Mexico a number of years, I made an extensive tour through the extreme southern end. It would require volumes to write of the many things of interest seen. Near Puebla de Zaragoza, I found the pyramid of Cholula, the period of which is unknown. This pyramid was there when the Aztecs came to Cholula. They heard the legend about it, which is, that it was built to reach heaven, but the builders were destroyed by fire, because of the anger of the gods. The trees growing over it attest the antiquity of this pyramid, upon which once stood a temple, whose never dying fires illuminated the city. Still further south I saw an ancient sphinx.

From thence I journeyed to Oaxaca, a land that possesses the most delightful climate on the face of the earth. Oaxaca is called the "birthplace of heroes," Benito Juarez and Porfirio Diaz, and others having been cradled there.

While in Oaxaca, I had quite an interesting interview with a gentleman who had spent many years in Egypt. He said: "If I were to get the curios I brought from Egypt mixed up with those I have bought in Mexico, I should be unable to distinguish one from the other."

The origin of Oaxaca is veiled in as much mystery as are the nearby ruins of Mitla, which have been, at once, the joy and the despair of archeologists. The ruins of the Acropolis still stand in Athens, pointing backward to a definite period; the fall of Babylon was trumpeted to the world; but no sign points to the builders of the temples of Mitla, Palenque and Uxal, no sound echoes from the dead past to give them voice—they stand alone in their mystery. It is, however, of the deepest interest to know that we possess the "rosetta stone"—the one possible key—which was found in the south, and a hope is entertained that the hieroglyphs of Mitla may yet be deciphered.

If all were told of the beauty, sublimity, and wonders of Mexico, the story would not be credited; so, this effort will be limited to just a few points of interest. For poetic beauty, the valley of Anahuac, in the midst of which stands Mexico City, is perhaps the highlight of the great republic. It so chanced that during my southern trip, while I sojourned in Mexico City, President Diaz was spending the winter in his palace, in the city, and the Castle of Chapultepec was open to visitors.

How Secretary Root Was Entertained

The day I stood upon the balcony of Chapultepec was a perfect one, and I looked out upon the fairest scene on earth. While the grandeur was dazzling, it was the pure poetry of it all that sank into the consciousness, to remain forever. The magnificent city was like a queen enthroned, the towers of the cathedral rose in the sunlight, and far away the "White Woman," Iztaccihuatl, seemed to whisper "Peace." The whole scene was a glory that can never fade.

Chapultepec Castle has been the successive home of all the emperors and presidents of the land. It was at Chapultepec that President Diaz so royally entertained Secretary Root and his family. The castle, already splendid, was refurnished throughout at an expense of one hundred thousand dollars. The Mexicans have a proverbial greeting to visitors, as they enter their homes: "This house is yours."

This became literally true for the time being with Secretary Root, for the entire castle, servants, carriages, and cars, were at the

disposal of the Secretary and family, while President Diaz and his attendants moved to the national palace. A great fete was given in honor of the American viceroy at an expense that would make European receptions to their royalty appear tame. Artificial lakes were made; not far away is a natural river that winds its way through the oldest cypress grove in the world. Electric lights were arranged among these trees and along the borders of the lakes, with an artistic effect perhaps never before seen. The principal band of Mexico City, second to none in the world, assisted by other bands, gave forth classical strains that echoed through the mighty grove, and one wondered, if the shade of Montezuma should return, would he remember that he was the first emperor that ever dwelt on the Hill of Chapultepec. The entire series of entertainments to Secretary Root were on a regal scale, and were emphasized by that ease, refinement, culture, and elegance so characteristic of the educated classes in Mexico—indeed, more or less characteristic of all classes.

An Example of Hospitality

Another example of hospitality, as fine as that of President Diaz's, came under my notice. One day an anxious Mexican came to my office and informed me that an American was very sick with fever, down by the railroad. The Mexican was a daily laborer. I went with him and found the American

lying on the only bed the hut afforded. The Mexicans had slept on the floor, had given this stranger of their food, and had done everything for his comfort that their limited store could provide. The American was unknown to them and had stopped there, exhausted by his tramp from Tampico and the fever, of which he already was a victim.

The Mexicans are as artistic as hospitable. They are inherently artistic, reflecting, at times, an influence that suggests the pristine glory of Alexandria. Their love for the beautiful is manifested, from the flowers in tin cans around their huts to a Titian, at Tzintzuntzan, presented by Philip II of Spain. More than the price of the "Angelus" has been offered for Titian's "Entombment," but the people refuse to allow it to be taken from their country at any price. Likewise the millions of J. Pierpont Morgan failed to acquire a masterpiece from the cathedral of Mexico City.

But for the revolutionary movements, Mexico, the land of infinite possibilities, would now stand on a par with the leading nations of the world. Oh, that someone with the strength of a Cromwell and the gentleness of a Mazzini would arise and unify all factions in Mexico, harmonize all the good that is in her people, start them on the path to personal freedom and universal liberty. Could this be done, in less than a quarter of a century the whole world would wake up and wonder. *Ojala!*

Circumcision in the Female

Its Necessity, and How to Perform It

By BENJAMIN E. DAWSON, A. M., M. D., Kansas City, Missouri

President, Eclectic Medical University

EDITORIAL NOTE.—We have had several inquiries from readers regarding this operation, especially as to the method of performing it. In the most interesting paper which follows, Doctor Dawson answers all our correspondents' questions. Also, he shows that intervention of this kind is imperatively required in many conditions not generally understood.

BAKER BROWN, nearly half a century ago, recognizing the disastrous reflexes and nervous disturbances, often caused by the clitoris, boldly amputated the offending organ with excellent results in some cases, while in others great disaster followed and the work fell into disrepute. Naturally surgical attention to the clitoris sank into oblivion. Within the last two decades this much-abused and neglected organ has received some consideration, and now it is much better understood and the proper surgery applied when required.

A large number of physicians fail to realize the importance of the proper condition of the foreskin in the male; that in order to avoid the dangers of convulsions, eczema, paralysis, constipation, tuberculosis, locomotor ataxia, rheumatism, idiocy, insanity, lust, and all its consequences, the prepuce must be completely loosened; if too long, amputated; if too tight, slit open.

A much larger number of physicians are seemingly ignorant of the fact that females have an organ anatomically corresponding to the penis in the male. They are both

erectile; each consists of a glans, a body and two crura; the glans in each is partly covered by a prepuce with a frenum attached below; each has corpora cavernosa, separated by an incomplete septum; each is supplied by nerve filaments from the pudic nerve and hypogastric plexus; each produces a cheesy substance (smegma), which hardens under an adherent prepuce.

The clitoris is more richly supplied with nerve filaments than any other organ in the body in proportion to its size. The same category of diseases having their origin in nerve-waste, caused by a pathological foreskin in the male, may be duplicated in the female, from practically the same cause, and, in addition, other diseases peculiar to females. Chorea, chlorosis, hysteria, and various nervous disturbances, nearly always have their origin in a faulty condition of the hood of the clitoris. The neglect of the clitoris is fraught with such disastrous results that the sin of omission, its neglect, which is almost universal, is painful to contemplate.

Importance of the Sympathetic Nerve

In the study of the waste and repair of the sympathetic nerve and the law of reflexes, we delve into a mine rich with precious, practical gems of truth; we harvest in a field rich with the golden grain of valuable knowledge. This study would readily show why a neglected clitoris is prolific of so much mischief.

The sympathetic nerve concerns itself with the life of the viscera; it presides over the visceral economy. The sympathetic system performs the vital functions which are independent of mind and present to us the idea of life. It dominates absorption, secretion, sensation, nutrition, peristalsis and functions of the sexual organs. Pathology in tissues supplied by the sympathetic nerves is manifested by disordered function; in tissues supplied by the cerebrospinal nerves, by pain. Pathological conditions, flashing out the most disastrous reflexes, are usually subconscious. Doctors are not easily educated out of well-worn ruts. Because there is no pain, no gross pathology in the clitoris, it is ignored by many otherwise careful diagnosticians.

The Causes and Consequences of Genital Irritation

The blood stream is that which does all bodily repair, heals all diseases, removes all pathologic conditions, induces growth and sustains life. It is of such vast importance that its circulation is dominated by the vaso-

motor system, a combination of both sympathetic and cerebrospinal nerves. An increased supply of blood to any organ invites function.

The blood supply to any organ may be increased by either one of two methods, external irritation or internal emotions. A cinder in the eye will summon an increased flow of blood to the lacrimal glands, and tears come into the eyes; a message of sorrow or joy, that sweeps over the deep vibrant chords of the soul, will produce the same result.

There is no exception to this rule, even the sexual organs being included. Internal emotions may elicit a desire to functionate in these organs; so may external irritation. Masturbation in a child under the age of puberty is not provoked by internal emotions. It is downright cruelty to punish a little child for masturbating. It would be as reasonable to punish one for crying with a grain of sand in the eye, or for being fidgety with ants under his clothing.

Reflexes travel along the line of least resistance. Irritation in the sexual organs, therefore, may reach the mental or moral faculties, resulting in imbecility, sexual perversion or moral degeneracy. Many neuroses and even psychoses have their origin in pathological conditions of the hood of the clitoris.

The girls have been sadly neglected; therefore, I make a plea in their behalf. I feel an impulse to cry out against the shameful neglect of the clitoris and hood.

A Hooded Clitoris as a Factor in Marasmus

Some two months since, a child, two and a half years old, was brought to me from Ottawa, Kansas. It presented a bad case of marasmus, malnutrition, anemia. There was little development; the lower limbs hanging almost as useless as strings. The child made no effort at vocal articulation. The clitoris was completely snowed under with an adherent hood. The adhesions were broken up and circumcision performed. The mother was instructed to retract the hood each day, in order to prevent adhesions reforming. This was neglected to some extent. The child was brought back, since I began this article. While the hood had adhered to the clitoris again, yet the improvement in the babe's condition is very gratifying. Her muscles have filled out; her thighs enlarged; she can bear her weight on the limbs and use them in taking a few steps; she speaks plainly several words; a slight pinkish tint has flushed the previously chalky white skin, and there is a

marvelous improvement in her general appearance. Under a general anesthetic the adhesions were again broken up. This child will recover.

Other Cases Relieved by Circumcision

A few months ago a little babe, three or four weeks old, had colic each time after taking the bottle. Examination revealed a hooded clitoris. The indicated work promptly and permanently cured her.

A girl baby, two years of age, had been troubled all her life with furunculosis, anuria, and malnutrition. She had been treated by different doctors for different diseases, but with no benefit. The clitoris was completely buried beneath an adherent hood. In a few hours after circumcision the red, angry boils on her face had perceptibly paled; in thirty-six hours they were dried up. Her kidneys began to act normally, and she was transformed from a cross, peevish, discontented child into a state of perpetual sunshine.

A girl sixteen years of age, well developed but neurotic, had been troubled with nocturnal enuresis from babyhood. Circumcision, with some other indicated official work, at once stopped this embarrassing condition.

Another, Sarah C., seven years old; a bright, beautiful child, well-nourished, a masturbator. She was brought to me to have this evil habit corrected. Examination showed she needed circumcision, to relieve constant external irritation, which was exciting the sexual passion.

A widow of forty-six came into my office, heavily veiled and requested a private interview. She handed me a copy of *The Journal of Official Surgery*, with a request that I read page 83. On this page was an article giving the symptoms of nymphomania caused by a hooded clitoris. With deep mortification, she said she had been bound in chains by this demon since she was a little girl, and that I was the first person to whom she had ever mentioned it. She requested permission to remain veiled, while I circumcised her under local anesthesia. She afterward expressed her heartfelt gratitude for her release.

A girl of ten, following an injury to the hip, presented all the characteristic symptoms of hip-joint disease—tenderness, heat, swelling, pain in the knee with soreness in the hip-joint in pressing upon the knee, also, from pressing against the trochanter; slight elongation of the limb, with a tendency to throw the knee across the other limb. This case was presented to a doctor, who was an

officialist, as well as a general surgeon. He found the clitoris in a very irritable condition and its hood firmly adherent. Following the needed attention to the clitoris, a few weeks in bed, without even using extension upon the limb, restored the limb to a perfectly normal state.

How to Circumcise the Female

Since beginning this paper, a surgeon of considerable prominence, with twenty years' experience, at the head of a reputable hospital, casually dropped into my office. I mentioned the subject, with my usual enthusiasm, when he asked what I meant by circumcision; was it amputating the clitoris? Another physician, with an experience of more than a score of years, acknowledged to me that he never saw a clitoris to recognize it. This reminds me that my paper would be incomplete without a description of the technic.

Before undertaking this work it is needful that one should have a clear conception of a normal clitoris and hood. Only two days ago a physician brought a lady to me for circumcision. Everything ready, I started to do the work, when a normal clitoris smilingly said, "Keep off the grass, please."

In a normal clitoris and hood the point of the glans is exposed and the complete retraction of the hood is easily accomplished. There is no smegma or irritable condition found between them. No tension of the hood is found upon stretching the parts laterally with the thumbs.

If the hood is so long as to cover the glans completely, it should be partly amputated; if adhesions exist, they should be thoroughly loosened; where smegma is found, it should be removed.

Circumcision is performed by cutting a V-shaped piece from the hood over the center of the clitoris. If very redundant, it will require a large piece; if tight, only a slit will be necessary. Grasp the hood in the center with Pratt's plug forceps or a pointed hemostat; lift it up from the clitoris and, with scissors, cut each side of the forceps, the cuts meeting above the point of the forceps, taking out a V from the hood. With a No. 0 or No. 1 plain catgut suture, take a stitch in the point of the V, uniting the under mucous membrane to the outer skin, just as in circumcision in the male. Usually an additional stitch will be required on either side to join the skin and mucous membrane. Where strong adhesions have been broken up, it will be necessary to slide the hood up each

day to prevent their reforming. What is preferable is to put a drop of flexible collodion on the clitoris, holding the hood up until it dries. It will then require no further attention.

This work can be done with local anesthesia. Cleanse the parts thoroughly and place a piece of cotton, saturated with a 10-

percent solution of cocaine, over the hood and clitoris. After a few minutes you can inject a 4-percent solution of the cocaine with a hypodermic syringe in a fold of the hood pinched up between the thumb and finger. Massage for a moment and proceed with the work. Abbott's anethaine will answer well, and in many ways is preferable to cocaine.

Thyroidectomy Under Local Anesthesia

Why the Local Anesthetic Is Preferred, and How It Is Used

By BENJAMIN H. BREAKSTONE, B. S., M. D., Chicago, Illinois

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STATISTICS will show that thyroidectomy, particularly in Basedow-Graves disease, when performed under general anesthesia, is a rather dangerous operation; and it is safe to say that the resulting deaths are in the neighborhood of 50 percent. The writer, some years ago, in one of the largest hospitals of Chicago, saw three thyroidectomies performed in one day and every one of the subjects died within a very short time. On the other hand, the mortality under local anesthesia, to put it conservatively, is much less than 5 percent. Thus, it will be seen that here is one operation where the choice always should be in favor of local anesthesia.

In order to get the best results, many factors must be considered as to when and exactly how to operate; and they concern (1) the patient, and (2) the method of operating, which includes (a) preparation of the field of operation, (b) the anesthetic used, (c) the technic.

When to Operate

Especially in exophthalmic goiter is it very important to select the proper time for operating. These patients all have their periods of improvement and periods of decline. Therefore, if we watch the patient for several months, we can soon discover these alternating waves of condition. As a rule they are regular. The length of the wave and its periodicity varies with each individual case, and, if the surgeon cooperates with the family physician the two can soon discover the period of decline, in which the patient is melancholy and morose, her heart beating very rapidly, her respiration shallow, and she is almost, if not entirely, sick in bed; whereas, in the improvement period, she

feels rather happy, ambitious, and in good spirits, the cardiac symptoms are barely noticeable, and exophthalmos is diminished.

It frequently has happened that, when the operation had been performed near the end of the period of decline, improvement followed, and we thought that the operation was a successful one. In these cases, however, the period of improvement would begin at that particular time and the patient would improve regardless of the operation. However, the period of improvement in these cases will be prolonged, for the reason that the patient is getting a good rest and careful supervision as to diet, elimination, and so on, with the added psychic effect of the operation. Many patients who have been operated upon during the period of decline have experienced bad results; whereas, had they been operated upon during the improvement period, the results might have been better.

Preparation of the Patient

Aside from the fact of operating at the most auspicious time, the patient should be thoroughly prepared; and the things aimed at should be the prevention of shock and of hemorrhage.

The psychic element in these cases is very great, and, to avoid shock, the patient should be prepared either by Crile's anociassociation method or by the judicious use of H-M-C. In this way, the patient will go through the operation without becoming materially excited and without making resistance. She also should have pleasant company, to engender pleasant thoughts. These things tend strongly to prevent shock. In many cases, the writer prefers H-M-C to the anociassociation-method, for the reason that the period of preparation is not as long. This is

especially a factor in patients of very nervous temperament or of moderate means who cannot afford special nurses during the period of preparation.

Hemorrhage occurs quite frequently in thyroidectomy, especially venous hemorrhage, and often it is very difficult to control. Before the operation, a complete analysis of the blood should be made, especially as regards the percentage of hemoglobin and the coagulability. Most of the patients affected with Basedow-Graves disease are anemic, and therefore should receive tonic treatment for a long period before the operation. It is not advisable to operate when the hemoglobin is less than 50 percent. Most of the patients who have died after the operation have had less than 50 percent of hemoglobin. The coagulability of the blood is a very important consideration and should be thoroughly investigated before operating. Calcium chloride, ergot, suprarenal extract, and more recently pituitrin have been used as preventive remedies for hemorrhage during thyroidectomy; but, since the advent of horse-serum, this is by far the best preventive to employ. In the absence of normal horse-serum, a moderate dose of diphtheria-antitoxin may be used. Of course, it is needless here to dwell upon the customary preparation of the patient, such as keeping the intestinal and urinary tract as clean as possible; the exhibition, in the presence of any urinary infection, of appropriate antiseptics (such as hexamethylenetetramine) and diuretics; and abstention from food for at least six hours previous to the operation if a general anesthetic is to be used.

Method of Operating

The best method of operating is, of course, the one that will accomplish the most radical extirpation in an aseptic manner, in the shortest time, with the fewest instruments, in the simplest way, with the least amount of hemorrhage, and the minimum amount of shock, so that no complications may follow.

The field of operation should be prepared in the customary way, avoiding strong antiseptics, and it should be plenty large, extending, preferably, from the angle of the jaw to the middle of the chest. As a routine, before the incision is made, tincture of iodine should be painted over the entire area.

For the anesthesia, the choice is certainly in favor of a local anesthetic; however, if for any reason this is excluded, then nitrous oxide and oxygen is by far the safest general anesthetic. In view of the fact that the field of

operation is near the mouth and nose, the anesthetic must be given in an aseptic manner.

The local anesthetic that the writer has used most frequently is a 2-percent solution of cocaine hydrochloride, freshly prepared.* The solution should be introduced along the line of the incision, under the skin, and a topical application of a 1-percent cocaine-solution in the field of operation be made. A 1-percent solution of novocaine may be used with equal success, and a 1-2-percent solution of it be used as a topical application after the incision is made.

The Technic

The technic described in the ordinary textbooks is the one which the writer generally follows; preferring the initial incision to be made across the neck, horizontal to the median line, dissecting the flaps upward and downward, so that a sufficient amount of muscle is exposed and the muscle-fibers are separated, in order to expose the entire gland. This incision is especially preferred, inasmuch as most of these operations are in women who desire a cosmetic result, while the scar resulting from this incision will conform to the folds of the skin of the neck and will not be very noticeable.

If the goiter is cystic, the capsule with the cyst can be removed in such a way that the rest of the gland may remain. If, however, the operation is for exophthalmic goiter, then both lobes of the gland must be removed, leaving the isthmus. But, if the tumor is from the isthmus of the gland, then the operation is quite difficult, since it is frequently necessary to dissect below the clavicle and behind the sternum; particularly is this necessary in cases of pressure upon the larynx or trachea, causing difficulty of breathing or of phonation; still, at least one-eighth of the gland should be left, so that we may not have myxedema following the operation.

Postoperative Treatment

It is not necessary, as a rule, to establish drainage. For this reason a collodion dressing is applied to keep the wound sterile for ten days, at which time the skin sutures are removed. If, however, in infected cases drainage is required, a separate opening should be made at the most dependent part of the field of operation, through which a rubber tube is passed from within the wound and left protruding some distance; the

*See my article on use of cocaine as a local anesthetic in *THE AMERICAN JOURNAL OF CLINICAL MEDICINE*, and *The American Journal of Ophthalmology and Oto-Laryngology*.

dressings then can be placed around this tube in such a manner that the drainage will not contaminate the line of incision. Great care should be exercised in having the bandage applied so as not to cause pressure upon the larynx.

If, in emergency, a rapid operation is required and it becomes necessary to remove all thyroid tissue, or, if by accident, the entire thyroid tissue is removed and myxedema ensues, then feeding the patient with thyroid becomes necessary.

The Rational Treatment of the Summer Diarrheas of Infants

By THOMAS G. ATKINSON, M. D., L. R. C. P. (London), Chicago, Illinois

THE modern viewpoint regards all the clinical varieties of infantile intestinal infection (gastroenteritis, cholera infantum, enterocolitis, and ileocolitis) as essentially the same in etiology, pathology, and course, the differences exhibited being determined solely by the portion of the tract attacked, the virulence of the attack, and the depth to which the mucosa is involved. The bacterial findings are the same in each of the varieties, the dominant organism being the Shiga bacillus.

Clinically, the topographical forms hardly ever are sharply defined, but either overlap or succeed each other. Consequently, the general principles of treatment are the same for all, varying only in detailed application, according to the part of the tract which the treatment is designed to reach.

Before proceeding to the discussion of the infections proper, we will consider, briefly, the condition known as acute indigestion.

Acute Indigestion

In acute indigestion, it is true, there is a disturbance in the gastric and intestinal flora, owing to the derangement of the digestive function; nevertheless, the pathogenic bacteria do not actually get the upper hand, and under proper treatment the normal bacterial condition is quickly re-established. However, a continued and unrelieved indigestion may, very readily, pass into an actual pathogenic infection.

At first, it is almost impossible to differentiate an acute intestinal indigestion from a more serious gastrointestinal infection, inasmuch as the initial symptoms are substantially the same in both; consisting, as they do, in a rise in temperature, a rapid pulse, vomiting, abdominal pain, diarrhea—the stools containing undigested food—and sometimes convulsions.

Diagnosis can be made only after twenty-four hours under proper treatment, when an

acute indigestion will subside and all symptoms ameliorate, whereas, a true infection will grow steadily worse, in spite of the best treatment, with all the symptoms aggravated.

The treatment, therefore, at the beginning is the same in either case, as follows:

Food should be completely withheld for twenty-four hours. If the stomach be full when the child is first seen, it is well to empty it by means of an emetic. Then the gastrointestinal tract should be cleaned out thoroughly by giving small doses, 1-10 grain, of calomel, aromatized to make them agreeable to the child, to which it is excellent practice to add minute doses of the bile salts—to be followed the next morning by a little sweetened laxative saline. The lower bowel may be washed out with warm water.

As a rule, this simple treatment will serve to control an attack of simple acute indigestion, so that on the second day feeding may be cautiously resumed.

However, should it be found that after the first two hours' treatment the patient's temperature remains unchanged or even rises, while the diarrhea grows worse, both as to quality and quantity, then we must assume that we are dealing with a more serious intestinal infection, and, consequently, prepare to resort to more vigorous measures.

Gastroenteritis

Gastroenteritis is a true infection. Its morbid element is, that there obtains a predominance of the pathogenic bacteria, chief of which is the Shiga bacillus, or the bacillus dysentericus, a germ not normally found in the bowel.

The onset of gastroenteritis is usually, but not always, more violent than that of acute indigestion. As a rule there are more marked evidences of toxemia, accompanied by great prostration from the outset. The stools quickly become mucous and foul-smelling,

finally changing to the typical rice-water stools—which, in fact, are nothing but toxins in solution in body-fluids. The child loses weight rapidly, owing to the loss of fluids, and the fontanelle is depressed.

The initial treatment is the same as already described under acute indigestion. However, after the first twenty-four hours we must, of course, support the child's strength with adequate nourishment.

In breast-fed babies, the intervals between feedings should be doubled, or trebled if necessary, and in the intervals the child should receive whey and barley-water. It also should frequently receive a drink of plain boiled water. The bottle-fed baby should be taken off fresh milk until cured. On the second day, it should be given long-interval feedings of whey, buttermilk, and barley-water, to which may be added albumen-water; the intervals being lessened as the progress may suggest. When the diarrhea has stopped, the feeding may be returned gradually to the normal schedule.

The following will be found an excellent drink for these little patients, being both refreshing and antiseptic:

Lactic acid.....grs. 40
Orange-flower water.....oz. 1
Distilled water, enough to make.....ozs. 8
Give a teaspoonful, according to conditions.

Drug-treatment is of secondary importance in the acute stages of intestinal infection; indeed, the less medicines we give, the better. Even in the matter of catharsis, having once thoroughly cleaned out the bowel, the latter should not thereafter be disturbed until the stools show signs of returning to normal. Above all, no astringents or opiates should be given during this stage, since such measures seriously impair the defensive capacity of the bowel itself. The only remedial agent that should be given from start to finish is the bacillus bulgaricus, which may be administered in tablet form. The tablets may be dissolved in water (one tablet in a teaspoonful of water, four or five times a day) or, if preferred, the culture can be employed in the form of bouillon diluted with water.

As soon as the bowels have been well cleaned out and the stools begin to assume their normal condition, we may begin to give remedies designed to check the diarrhea and to stimulate healing of the intestine; the sulphocarbolates being best suited for this purpose. A good practice is, to give 1-2 to 1 grain of the compound sulphocarbolates every two or three hours, or else, copper arsenite, 1-1000 grain, at the same intervals.

There is no essential difference between gastroenteritis and cholera infantum, except in degree of severity.

Cholera infantum is a very severe form of gastroenteritis, in which all the symptoms are greatly intensified, especially the general prostration and the diarrhea. Its treatment is precisely the same as that of gastroenteritis.

Ileocolitis

In this form of intestinal infection, the lower bowel is the chief seat of the disease; otherwise, its etiology and pathology are essentially the same as are those of the other varieties. Its general symptomatology is about the same as that of gastroenteritis, only, that the fever is not so high nor the general toxemia so great, because absorption is less in the lower than in the upper intestine. On the other hand, the pain is more marked, owing to the involvement of the peritoneum. The comparatively low temperature and small degree of toxemia, however, should not mislead us as to the severity of the disease.

The *catarrhal type* generally is primary, and is the most benign form. Its clinical course resembles gastroenteritis, except for the severe abdominal pain and the very mucous character of the stools, which may even be streaked with blood.

The *ulcerative type* is, as a rule, secondary, and represents the exhausted condition following a long struggle with the disease. It runs a course almost like typhoid fever, being, in fact, often called the typhoid fever of infancy. There is ulceration of the lymph-glands and patches of the ileum, with frothy, mucopurulent stools. The little patient becomes exhausted and poisoned and lapses into low delirium, usually dying of toxosis and exhaustion.

The *membranous type* is the most violent of all. Not only the mucous but also the sub-mucous membrane is rapidly destroyed and sloughs away, appearing in the stools as shreds. The temperature goes very high (106° F.) because of the denuded state of the absorbing surface. Delirium and convulsions, finally passing into coma, are the culminating symptoms.

The general treatment of ileocolitis is the same as that laid down under the other forms of the disease. It is in the local management that it differs, because we here not only are obliged to keep the intestinal tract clinically aseptic, but also to combat the pathology of the bowel itself.

In the catarrhal form, no local injections should be given, since they are likely to

check the defensive secretion of the bowel. In the ulcerative and membranous type, there is no defensive secretion to check; consequently, the colon should be flushed, every two or three hours during the acute stage, with a suspension of bulgarian bacillus (galactenzyme), dissolving the tablets in the proportion of two or three to an ounce of warm, sterile water. In severe cases, an occasional injection of silver nitrate, 1 part in 500 or 1000 parts of warm soft water, may be administered with advantage.

Injections should not be given with the high colonic tube, as its introduction irritates an already inflamed membrane and, so, aggravates its condition.

The ordinary rectal tube should be employed, the colon being reached by elevating the buttocks and, if necessary, gently manipulating the abdomen toward the colon, meanwhile holding the sides of the buttocks together, to prevent the fluid from being ejected. While the intestine is distended with fluid, gentle manipulation is not likely to cause traumatism.

The diet in ileocolitis is substantially the same as in the other forms, except that decomposable albumens should be eliminated as much as possible. It is better, therefore, not even to feed whey or albumin-water during the acute stage, but, rather, to confine the child to barley-water or buttermilk. When convalescence sets in, the return to normal diet should be exceedingly gradual and cautious, predigested concentrated foods being fed for a long while.

Nursing-Care of the Patient

The personal care of the child is a large factor in the successful management of intestinal infections. Wherever practicable, it is advisable to have a trained nurse on duty; preferably one whose temperament and experience have specially fitted her for nursing children. But, of course, this is not always practicable, in which case it devolves upon the doctor to act as head nurse, with some member of the family (mostly, the mother) as his deputy, to whom he must give full, explicit, and detailed directions for the care of the little patient.

The three prime principles in this duty are: *quiet, cleanliness, regularity*. Quiet for the child's body and mind; cleanliness of the person; regularity in carrying out the various procedures included in the treatment.

The necessity of quiet is put first, because it must govern in carrying out the other two. It is for this reason that the services of a

trained nurse are so desirable, because her training has given her the knack of performing the offices for the sick without seriously disturbing the patient.

The child is to be kept in bed—or at least undressed and lying down—even from the time the nature of the trouble is merely suspected, and is not to be taken up at all, except in the case of a breast-fed child for the purpose of nursing it. Otherwise, the little patient is not to be taken up or handled more than is absolutely necessary to the carrying out of the treatment. Walking the room with the child in the arms is to be utterly forbidden; neither should the attention of the child be engaged or stimulated; it is better left completely alone. The room is to be kept cool and quiet and darkened, with plenty of fresh air circulating through it, but no direct draft upon the child's body. The little patient should be just sufficiently clad and covered to insure comfort. In hot weather, nothing more is needed than a thin muslin slip.

Scrupulous cleanliness of the child's person must be maintained, both general and local. It should receive a tepid bath at least twice a day during the entire course of the disease, and even oftener if it can be done without unduly disturbing the child. Whether this bath shall take the form of a tub-bath or a sponging is a matter to be determined by the condition of the patient and by the circumstances of the case. If the child is profoundly prostrated, it is better not to subject it to the exertion of a tub-bath, but to administer a sponging; so, also, if there are no proper facilities for a tub-bath and no one who knows how to give it properly.

The bed or cot on which the child lies should have its coverings changed frequently. It should never lie in a cradle, but on a spring-mattress, where it has plenty of ventilation. And, what is most important of all, the napkins must be closely watched and removed just as soon as they are soiled. They should immediately be thrown into a pail containing the following:

Phenol solution, 5 percent	ozs. 4
Common salt	ozs. 2
Water	gal. 1

After that, they must be boiled for two hours in a similar solution. On removing a soiled napkin the child's parts should be carefully cleaned with warm water to which a little mild alkaline antiseptic has been added.

Whatever therapeutic measures are determined upon, regularity in their applica-

tion is a *sine qua non* to their success. Unless they are to be regularly and faithfully carried out, they may just as well be omitted. Feeding, bathing, enemas, hypodermoclyses, medication, everything must be done on clock-time and at definite intervals, if it is to be of any avail.

It is to be borne in mind that the body of the patient is the battleground of a desperate and critical fight and that a single failure to bring provisions or arms or reinforcements to the field at the proper moment may be suffi-

cient to turn the tide of the combat. Needless to say, of course, that every procedure must be carried out thoroughly and skilfully. In the absence of trained assistance, it is better that the more difficult procedures, such as colonic injections, hypodermoclyses, and the like, be carried out by the doctor himself. And, as previously intimated, everything must be done with the minimum of disturbance and irritation to the patient. Special care is to be taken, in handling the child, not to knead or traumatize the abdomen.

Acute Gastroenteritis*

And Its Successful Management

By GEORGE H. CANDLER, M. D., Chicago, Illinois

Author of "Everyday Diseases of Children"

THERE can be no question that the more serious forms of enteric disease can be avoided to a great extent (and controlled promptly and positively when they do occur) by modern methods of medication. Many of the cases of "summer diarrhea" which terminate fatally could have been easily controlled in their early stages. Even cholera infantum in its typical form (which after all is rarely encountered) will yield readily to proper therapeutic measure during the first twenty-four hours.

Children who have been prone to looseness of the bowels, during the months of July, August, and September, are, under the care of the well-informed practitioner, enabled to pass from spring to winter without any marked disturbance of the alimentary tract. A certain increase in the number or altered consistency of the stools is to be looked for when the fruit season arrives, and with the advent of spring and "green things to eat" the average human being finds his bowels moving more freely. This is desirable and normal. Two or even three loose stools per day should not be regarded as pathological, but at the first sign of enteric disorder—colicky pain, frequent passage of thin, watery or pasty, stinking stools—treatment should be instituted.

The Importance of Early Recognition

The doctor should impress upon his clientele the positive necessity for prompt treatment. He should especially explain to young mothers

the importance of an early recognition of acute enteritis, pointing out the fact that in many cases life has been sacrificed simply because the doctor arrived too late. Often the little patient, stricken twenty-four or thirty-six hours prior with acute gastroenteritis (or cholera infantum), will succumb to cerebral congestion after diarrhea has been checked and other distinctive features of the disease eliminated. Others pass into the sleep that knows no waking from sheer exhaustion, within the same period. If early and correct treatment is called for more urgently in any one disorder than another it is in acute gastroenteritis.

This disease is very commonly and mistakenly termed cholera infantum, the latter being an entirely different and much more serious malady. The writer has not seen half a dozen cases of true cholera infantum in five years. Acute gastroenteritis is, however, omnipresent. The symptoms vary in severity and are known to every practitioner. The bacteria discovered in a given case may be numerous—streptococcus, the colon bacillus, staphylococcus, bacillus proteus, pyocyaneus, and so on—any one or a variety of these microorganisms being distinguishable in the stools. As, under medication, the frequency of the latter lessens, the severity of the symptoms moderates.

There Are Two Forms of the Disorder

Two forms of the disorder are recognizable, one mild, the other severe.

In the first form, the child (who may be teething) shows signs of malassimilation: food passes through the bowel imperfectly

*Reprinted from Doctor Candler's "Every-Day Diseases of Children," Second Edition, which is published by The Abbott Press, Chicago. The accompanying article illustrates the extremely practical character of the material contained in this volume. Price \$1.00. We can supply it.

digested, accompanied by much gas, and attacks of vomiting occur. After a day or two the vomiting and stools become more frequent, the latter bearing either a greenish brown slime or consisting of a greenish or dirty-gray fluid.

Still later there may be much mucus streaked with blood. The smell of such stools is most offensive. Throughout, the child is fretful and complains of cramping pains, or, if too young to do this, draws its legs up and screams. The skin is hot and usually dry and the temperature in mild cases rises one to two degrees. Occasionally, vomiting is altogether absent; in others, diarrhea does not appear for some hours after vomiting and other evidences of gastrointestinal inflammation.

In the severe forms, all these conditions are accentuated. The temperature may reach 103° F., and as many as fifteen or twenty stools be voided in the twenty-four hours. I have noticed that such cases usually begin with obstinate vomiting and the passage of one or two stools containing much undigested food. The vomitus at first contains sour food-material and later is a foul fluid containing mucus and bile. As the child is extremely thirsty and craves water, the abundance of the fluid can easily be accounted for.

This disease affects alike the bottle- or breast-fed infant and the child on mixed diet. While improper feeding is without doubt the usual cause, heat and bacterial invasion of an exhausted system are alone responsible in many instances.

The disease must be looked upon as mildly infectious and the stools and vomited matter should be carefully disinfected. The affected child may gradually waste and become almost a skeleton or, after a few days, the disorder abating, recover rapidly. In very marked cases death may take place within forty-eight hours. In some cases two or more such attacks occur in the one season and not at all infrequently enterocolitis sets up.

Treatment of Acute Gastroenteritis

Knowing, as we do, that the whole chain of symptoms is due to the presence of undesirable material and bacteria and that no gross pathological lesions exist, treatment is really simple, but to be effective it must be of a positive character.

As in cholera nostras, we have to get rid, as fast as we can, of the fermenting, germ-breeding, toxic bowel-contents. Further, being aware of the presence in the rugæ of the

intestine of millions of pathological microorganisms, we must not put into the alimentary tract material favoring germ-propagation. We must also exhibit, in effective doses, intestinal antiseptics of an astringent character.

The first step is to stop all food and wash out the lower bowel with a plain, cool, salt or mildly alkaline antiseptic solution. If the vomiting is marked, pass a catheter into the stomach and wash it out; as this is not always feasible, give a mild solution of magnesium sulphate slightly acidulated and sweetened with saccharin. Saline laxative, one small teaspoonful to the half pint of water, works perfectly. It is well to give gr. 1-10 to gr. 1-6 of calomel and gr. 1-12 to gr. 1-64 of podophyllin half-hourly for four to six doses, according to age of child, to secure a thorough emptying of the intestine and increased hepatic activity. This is the "first thought." One dose should be given before anything else is done and the physician himself (unless a competent attendant is present) should then give the enema. One hour after the last dose of calomel, exhibit a fairly full draught of saline laxative. This serves to flush the already cleaning intestine and leaves the mucosa in good condition to withstand bacteria and absorb such nutritive material as is allowed.

During this time, if the skin is hot and dry, have the child sponged hourly and covered lightly with a thin flannel garment. It is to be kept in a cool shady place. Barley water, made thin, will prove the best drink at this period. Every two hours at least one grain of the combined sulphocarbolates of lime, sodium and zinc should be given—preferably in solution. A mentholated saccharinated tablet is obtainable which serves excellently. In bottle-fed infants this solution may be given from the bottle, as also may the saline laxative draughts. In older children, the powder, mixed with a little sugar of milk, may be given on the tongue and a drink of boiled (or barley) water follow.

I have found the Bulgarian bacillus invaluable; the free administration of a pure, virile culture absolutely inhibits the further growth of undesirable microorganisms and enables us to give the child its natural nutrient—milk—feeling certain that it will be assimilated. The physician must not forget, however, that many of the so-called "buttermilks" and "buttermilk tablets" do not contain the bacillus bulgaricus. Galactenzyme presents this and symbiotic organisms and should be regarded as an active remedial agent, not a mere "milk-

sourer." As a matter of fact, even when a good "buttermilk" is being used, galactenzyme should be given also.

Very minute doses of atropine (or hyoscyamine) are of great service during the first day: gr. 1-250 may be dissolved in six teaspoonfuls of water and a teaspoonful given every two hours.

The Child Improves

If this treatment is carried out, the next day will reveal a recovering patient. But here, care means everything; the sulphocarbolates must be continued, the lower bowel flushed and the mouth kept clean. Albumen water, barley water containing a few drops of fresh beef juice, or a few spoonfuls of a well-cooked cereal gruel may be given. Zwieback is safe and well liked by most children. Under ordinary circumstances this diet may be slowly but surely added to until normal feeding again prevails.

Brucine, gr. 1-128, or berberine hydrochloride, gr. 1-64, may be given as a bitter tonic for a few days. It is also a good plan to institute about the fourth day another course of calomel and podophyllin; or in place of the latter irisoid, gr. 1-6, may be given hourly for four hours. If the stools are markedly offensive and clay-colored, add bilein, gr. 1-12, to every other dose. The effect is immediately noticeable.

In a few cases hyperacidity is marked; here calomel and soda (aa. gr. 1-4) act rapidly. Should the condition persist, a few doses of "neutral cordial" will promptly prove corrective.

It should not be forgotten that in all these cases more or less local congestion exists; atropine is our best remedy for localized congestion, bringing, as it does, the blood to the surface. Moreover, this drug stops the excessive secretion of mucus—another desirable feature. It is always well to give fairly full doses of atropine at once when the skin is cold and pale; cactoid and brucine (aa. gr. 1-64) will perhaps prove the best subsequent stimulants.

If the disease has progressed and weakness is marked, nuclein is strongly indicated; six to eight drops should be given under the tongue thrice daily. The "nucleinated phosphates" are perhaps even more useful. It is in these cases, too, that rectal injections of beef juice and starch water prove so valuable.

Where the system has been deprived of large amounts of serum, enteroclysis is imperative, and here decinormal salt solution with two drams of prepared blood to the pint proves especially valuable.

It is well in all well-marked cases to give thin, clear beef- or chicken-bouillon for the first day or two after normal conditions are restored, returning to milk very gradually.

Aconitine in Summer Diseases

With Suggestions for Supplementary Medication

By CHARLES F. LYNCH, M. D., Terre Haute, Indiana

WITH the arrival of the summer months, the practitioner is certain to be confronted by a large number of the usual type of summer-complaint cases. These acute inflammations in the child or in the adult are accompanied by high fever, loss of appetite, and frequently nausea, vomiting, and diarrhea.

"All these symptoms are but a manifestation of the underlying pathological condition produced as the result of irritation of the mucous membrane of the bowel by severe toxic substances. The mucosa of the intestine of the infant being more delicate and more responsive to irritating poisons, explains the greater frequency and the more severe character of these summer diarrheas in the child as compared with the adult.

If we were able to see into the stomach and bowel of the little sufferer from an attack of

this fatal summer diarrhea, we should find that the normal pinkish-colored mucous membrane has been replaced by a red, angry-appearing surface, the result of the reaction to the irritating poisons generated by bacteria carried into the mouth with the food or otherwise. Some of this poisonous material is absorbed into the blood stream and, acting upon the delicate nervous system and the sensitive heat-centers, causes pronounced nervous phenomena and the development of a high febrile temperature.

In the treatment of this condition, there is one remedy that stands out preeminently at the head of the list, and is one that we should all thoroughly familiarize ourselves with at this time. Indications for the use of aconitine during the summer months are particularly frequent, and especially is this true in handling

these acute toxemias in infants and children. A most effective remedy in the adult, aconitine is doubly so in the child, and its use cannot be too highly recommended.

Summer Diarrheas Mean Poisoning

Summer diarrheas are, as a matter of fact, nearly always due to poisoning. The poison involved is manufactured in the intestinal canal of the child by bacteria that have been taken in with milk or other foods. In cases where milk is given that has not been kept under proper conditions, it often not only will carry the germs, but also a large dose of their toxins, at the time it enters the gastrointestinal tube.

The first indication, then, in handling these cases will be, to clean out the stomach and bowel, and thus remove these poison-manufacturing germs and as much as possible of their toxic products. Next, we must shut off the source of supply of the toxic bodies. This is best accomplished by withholding all food for twenty-four or forty-eight hours, merely giving the child oatmeal-gruel, barley-water or other noninjurious liquid diet. For the purpose of cleaning out the intestinal canal, fractional doses of calomel (gr. 1-10) every ten minutes for ten or twelve doses is very effective. The calomel with aromatics tablet is ideal for this purpose. This is advantageously followed twelve hours later by a dose of castor-oil.

Next—Neutralize the Toxins

By these measures, we eradicate the source of the poisons and shut off their supply to the body. The next step in treatment is, to administer such medicaments as will neutralize and limit the effects of the toxins that have already been absorbed, and also such as tend to promote the repair of the damage that already has been done. And here is where the efficiency of aconitine becomes pronounced, and its judicious and intelligent employment will give most pleasing results.

Aconitine is an agent that tends to equalize the circulation and relieve the congestion of acutely inflamed parts. It is an agent that dissipates the fury of the storm before the damage is done, and breaks its force. It is a mildly acting remedy and produces its effects without destructive reactions on the part of the tissues. There is no other single remedy as powerful in limiting the harmful effects of an acute inflammation as aconitine, properly given. It is a remedy which presents its best effects when administered at the onset of these inflammatory phenomena.

Indeed, this drug is not indicated, as a rule, after the lesion has become deep-seated and marked tissue change has taken place. The time for aconitine is at the starting, and here it exerts a most beneficial influence.

This drug is preeminently the child's sedative. Under its influence, the high fever is reduced, the pores of the skin are opened, and the elimination of toxic materials and radiation of heat are promoted. Acting upon other emunctories of the body, aconitine also stimulates elimination of the poisons that are destroying the vital energies and the delicate tissues of the patient. The action of the kidneys is promoted, relief of congestion in the mucous membrane of the intestine restores normal function there, and in every direction the action of the drug is beneficial, because in line with indications.

The "Rapid Thready Pulse," and Why

In these acute gastrointestinal irritations, the heart generally is wildly reacting to the influence of the toxic materials carried in the blood stream. As a result, the patient will present a rapid, hard, thready pulse. This is the cardinal indication for the use of aconitine in children as well as in grownups. The typical aconitine-pulse will be seen with especial frequency in the child. In its soothing action upon the irritable heart, this drug is a most pleasing therapeutic weapon. It quiets the hypersensitiveness, relaxes the tension, and promotes a slow, full beat, with a normal tension of pulse.

The skin which previously was hot and dry becomes moist and comfortably warm under the gentle diaphoretic action of aconitine in proper dosage. Other body-secretions are restored to normal, while the general as well as local effects are such as to promote a speedy termination of the inflammatory process.

The "Small Dose Frequently Repeated"

The keynote of success with aconitine, in the management of acute febrile conditions, is, proper administration and intelligent combination with other remedies when indications for the use of adjuvants are present.

Aconitine is a remedy the action of which is very ephemeral. Given by mouth, aconitine is absorbed from the gastrointestinal tract in a few minutes and passes through the body, and is quickly eliminated by the skin and kidneys, with stimulation of the function of these organs. Aconitine is absorbed in as short a space of time as fifteen minutes, while its elimination from the body does not re-

quire more than thirty minutes, as a rule. From this, it can be seen how unscientific it is to administer doses of aconite at three- or four-hour intervals. To get any sort of dependable results from this drug, the dose must be small and repeated at short intervals.

Small doses often repeated is the important point to remember in the administration of aconitine and of aconite in any form. Where tincture of aconite (U. S. P.) is made use of, the dose should not exceed 1-2 minim for a child of one year. This dose should be repeated at intervals of about fifteen to thirty minutes. In my private practice, I make use of the tincture to some extent, but have in the last year become very partial to the specific medicine aconite and the alkaloidal salt aconitine, giving the latter, as a rule, in 1-800-grain doses, at short intervals, the dosage for young children being established according to Shaller's rule.

Under this method of exhibiting the drug, the temperature soon begins to drop, the patient begins to perspire, restlessness is quieted, and the backbone of the inflammation usually is broken within a few hours.

Aconitine Synergisms

In acute inflammations of the digestive tract in children, there generally are found high fever and extreme restlessness. In the presence of these symptoms, the aconite action

is materially enhanced by the addition of gelsemium, or gelseminine. This remedy exerts a powerful sedative effect upon the nervous system, especially in the child, and the effect is, materially to increase the power of aconite.

For the purpose of enhancing the anti-phlogistic action of aconite, the combination with small doses of belladonna or atropine is very effective. The latter agent also counteracts the effects of acute inflammatory conditions of the same type as those in which aconite is applicable.

Especially for use in the gastrointestinal inflammations, ipecac or emetoid is a valuable agent, given in connection with aconitine and gelseminine or aconitine and atropine. Ipecac (or emetoid) in good-sized doses acts as a gastrointestinal irritant, but in minute dosage it tones up the mucous membrane of the bowel and has a most beneficial effect in restoring normal function to the glandular structures of the inflamed mucous membrane.

Another valuable aid in the management of these cases is, the combined sulphocarbolates—the intestinal-antiseptic combination. The use of these intestinal purifiers and protectors may be begun immediately after the calomel purge, and they materially assist in shutting off the absorption of toxic material from the bowel, thereby making more easy the work to be accomplished by aconite and its adjuvants.

The Physicians' Microscope

Its Construction, Preservation, Use and Application

By A. H. UHLER, M. D., Rochester, New York.

THE microscope may be defined as an optical instrument which magnifies and resolves minute objects that are invisible to the naked eye. By this process of magnification and resolution, we are able to see minutia

clearly defined and separate from surrounding objects.

Upon looking into the microscope, a large disk of light is seen, in which the object may be freely moved about. This is known as the

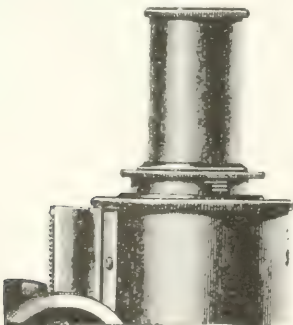


Fig. 1. Showing how the draw tube should be made



Fig. 2. The draw tube as it should *not* be made.



Fig. 3. The body tube.

field of the microscope, and its outer edge is formed by the magnified image of the eyepiece diaphragm. Its size depends upon two factors, namely: the actual diameter of the eyepiece diaphragm and the magnification of the upper lens of the eyepiece known as the eye-lens.

For convenience of description, the microscope may be divided into two parts—the

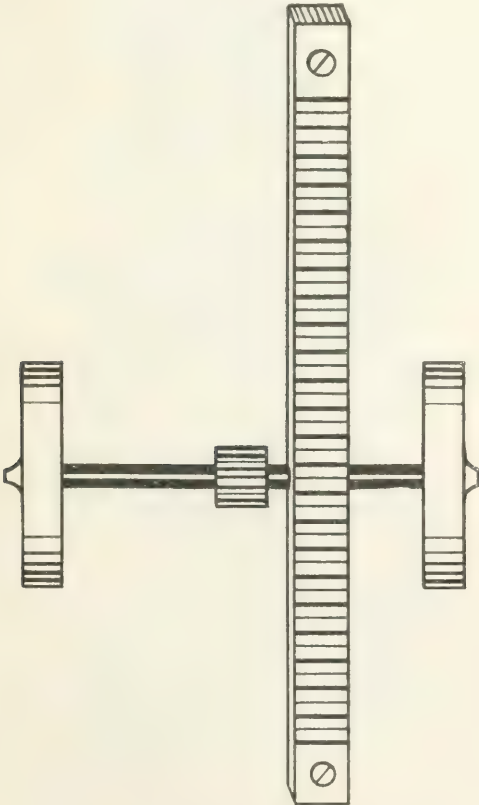
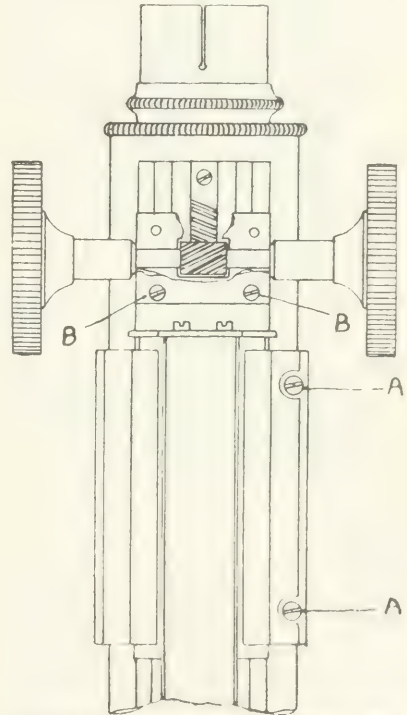


Fig. 4. The old style, antiquated rack and pinion movement.

optical and the mechanical—both of which are equally important for a good objective. Ocular, substage condenser, and mirror are of very little use when thrown into a heap on the table; they must be properly placed in relation to each other and so mounted as to yield their maximum effect. This is accomplished by means of what is known as the stand or mechanical portion of the instrument. I shall describe the stand or mechanical portion first.

Details of the Mechanical Portion

The stand consists of the following parts:
The draw-tube.



Figs. 5 and 6. Diagonal rack and twisted pinion.

The body-tube, also known as the body, barrel or main tube.

The nosepiece, with its society-screw at the lower end of the body.

The rack and pinion coarse adjustment.

The arm.

The fine adjustment.

The stage.

The spring clips.

The mechanical stage.

The tail-piece.

The substage.

The mirror.

The foot.

The joint for inclination.

The clamp to the inclination.

Details concerning these parts follow.

The draw-tube slides into the upper end of the body, and it is finished black or nickel-plated. It should be graduated in millimeters or inches. It should slide smoothly in a cloth-lined tube; some prefer a metal fitting, but the trouble is that this arrangement rubs

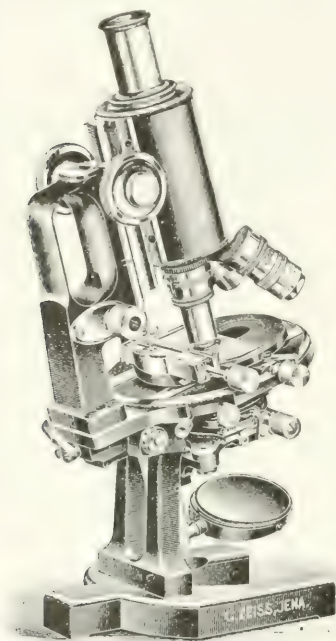


Fig. 7. The Zeiss stand.

the graduations from the draw-tube and causes it to become very unsightly. It occurs to the writer that a ball-bearing contrivance for this would be ideal. The milled surface by which the draw-tube is grasped should have a large surface, and when pressed home should be easy to take hold of, as shown in Figure 1. Figure 2 shows it as it should *not* be made, but still as it often is found at the present day.

The body-tube is that part which receives the draw-tube at its upper end and the nose-piece with society-screw at its lower part. The screw at the lower end is termed the society-screw (or the universal thread) because it was first recommended and adopted by the Royal Microscopical Society of London. It is 0.7969 inches in diameter and has 36 threads to the inch. The nosepiece, or objective, is screwed into this thread on the lower end of the body. Although all objectives are supposed to fit this thread, we find the German objectives sometimes are a little large. I trust the manufacturers will endeavor to remedy this. The threads

should be combed a little to make them a trifle smaller. The body-tube should be large in diameter, say, 50 mm., so that short-focus anastigmatic photographic objectives can be used without restricting their angle of view. Also, a large body permits of the use of a larger diameter of eyepiece and, hence, a larger field—which is a great comfort in low-power dissections or in examining large cultures, bank notes, and so on.

The nosepiece at the lower end of the body is screwed into its lower end, and is for the reception of the male thread of the objective.

The Adjustments

I shall now consider the construction of various means for the coarse adjustment. The common method of effecting this coarse adjustment is either by means of the sliding tube or by rack and pinion.

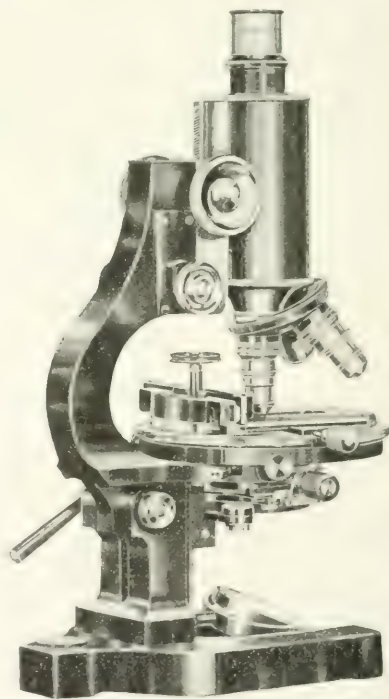


Fig. 8. Bausch and Lomb stand.

The sliding-tube adjustment is antiquated and should never be employed; for, it has two great defects. The first is that it cannot well be used with a nosepiece. The second objection is that the tube becomes loose from constant wear and thus endangers the object and objectives, as it is liable at any moment to let them drop on the object, with disastrous results. The only way I see that it could be perfected in the latter respect is, by giving it

a ball bearing, which bearing could be tightened up from time to time as any wear took place.

The old-style perpendicular or cross rack and pinion (Fig. 4) is antiquated and gives a jerky movement. It should never be selected—in fact, it is hard to find at present, having been superseded by the diagonal rack and twisted pinion, which has now been so amply tested as to show that it is all that is required for the purpose in question. When made properly (as, for instance, in the Grand Model Van Henrick microscope by Watson, and in stands by other eminent makers), it leaves absolutely nothing to be desired. It consists of a rack as clearly shown in Figure 5, and a pinion as seen in Figure 6. Its precise action is due to the fact that the leaves of the pinion enter corresponding teeth in the rack, not all at once as in the old form, but gradually, thus reducing friction to a minimum.

But, why in this modern age and generation the coarse adjustment cannot be driven by power—say, electricity, for example—I never could understand. I think the old method of

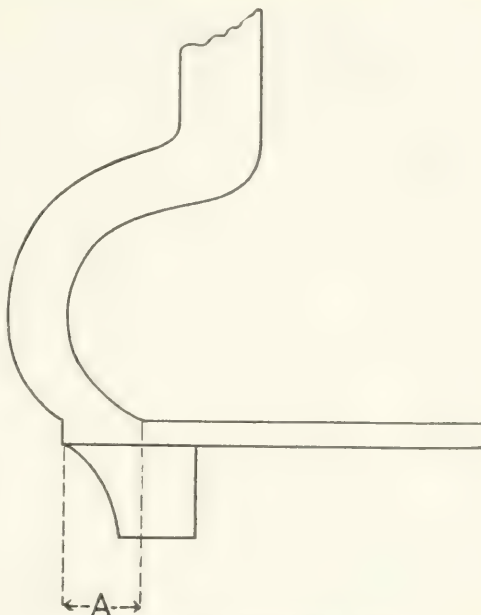


FIG. 10. Plane of stage as usually made.

turning milled heads to make the adjustments of a microscope are relics of bygone days and I call the manufacturers' attention to this suggestion for their careful consideration.

The Supporting "Arm"

The arm of the microscope is of importance because it supports the body-tube of the coarse and fine adjustments, while often it is so shaped as to serve as a handle for carrying the instrument from place to place. Three different styles of arm are in vogue, namely: the shape represented in the stand made by Zeiss (Figure 7), the one adopted by Bausch & Lomb (Figure 8), and that represented by the Spencer Lens Company's improved Continental Model No. 40 (Figure 9).

The arm of the (old) Continental model, is not to be recommended, because, when made with sufficient overhang to make an arm-axis distance of, say, 80 mm., there is too much strain upon it, with a consequent unequal wear of the triangular bearing of the fine adjustment, which sooner or later will show play that cannot be taken up even if a compensation mechanism be provided. Also, it does not form a suitable handle by which to carry the instrument, as the fine adjustment is liable to be damaged. In the improved Spencer No. 40 all of these defects have been carefully obviated by a proper handle placed beneath and parallel to the inner curvature of the arm. But the point is, if this stand is

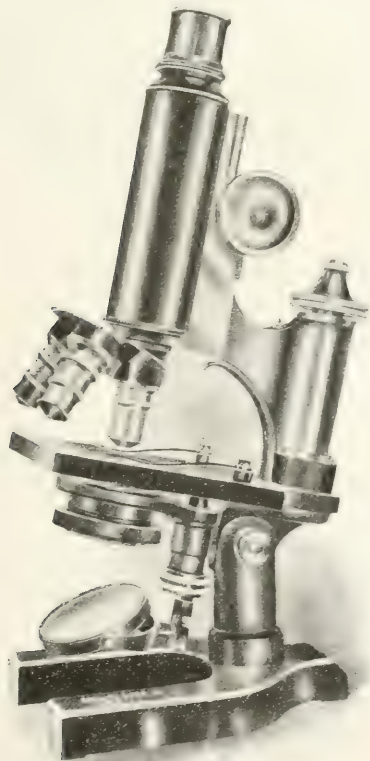


Fig. 9. Spencer stand.

grasped by the pillar when used by the uninitiated, it very likely will suffer.

The Bausch & Lomb stand (Figure 8), on the other hand, is about as perfect, so far as the arm is concerned, as can well be imagined; but even this instrument's arm could be

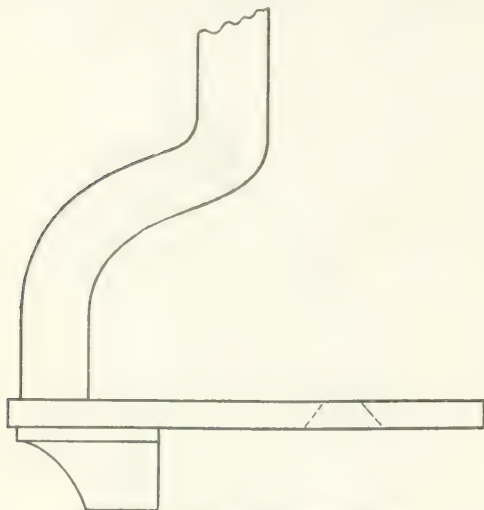


Fig. 11. A better planned microscope stage.

slightly improved if the center of the curvative of the arm were in the plane of the stage. Figure 10 shows it as usually made; Figure 11, as it should be. In Figure 10, the distance from the center of the stage to the front of the arm is cut down to the extent of A, whereas in Figure 11 this does not occur. In Figure 12,

we have an arm of very good shape, but it is rather unsightly and would hardly be employed for this reason. In the Zeiss instrument (Figure 7), we would suggest that the aperture in the handle be made large enough for the entire hand, or, about 90 mm. long by about 40 mm. wide, so that a moderate-

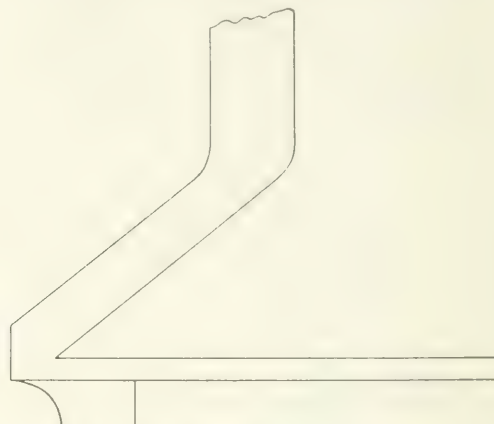


Fig. 12. Arm of good shape but rather unsightly.

sized hand could grasp it with ease and comfort, instead of admitting only one or two fingers. To sum up then: if the arm does not have sufficient room for all four fingers of the hand and give at least a distance of 80 mm. from the center of the stage to the front of the arm, it is in miniature only and not suitable for serious work.

(To be continued)

Nocturnal Enuresis

From a Series of Seventy-five Cases

By HARRIS DANA NEWKIRK, M. D., Minneapolis, Minnesota

Director, Research Department, Hennepin County Juvenile Court

I OFFER no apology for bringing this old, and usually considered simple, subject to your attention. From a considerable experience, I have learned that, even following to the minutest detail all the directions given in all the textbooks, so far as I have seen, we still shall have a goodly percentage of bed-wetters uncured; much to the chagrin of the physicians and the disgust of the family. So far as I have observed, the texts follow the usual plan of copying each other blindly, and then consider the matter thoroughly handled. True it is that many children who have been sufferers for years—and many of them really show mental anguish—have been

cured by the old-time methods, but, to reach the inveterate, obstinate cases that do not respond to ordinary treatment, is the true test and really is the keynote of the handling of all cases; for, the simple ones can be handled much more easily and quickly if the right procedure is followed.

Determining the Cause

Enuresis, or bedwetting (nocturnal), is caused by a partial or complete relaxation of the sphincter of the bladder during sleep, and this, in turn, has various causes. Holt, Chapin, Pisek, in fact, all the writers, lay great stress upon sources of physical irritation

as primary causes. Mention is made of phimosis, worms, acidity of urine, stone in the bladder, reflexes in the anal region (fissures, polypi), reflexes in other parts of the body (adenoids, thyroid insufficiency), and constitutional conditions (rickets); in fact, any irritation any where in the body has been mentioned as a possible cause. The physician is urged to make a thorough general examination and to advise the removal of every such source of irritation, in the hope that somewhere before he gets through he will hit upon the cause and, thus, perform a cure.

I have no fault to find with this procedure, for, if real sources of irritation are present, they should be removed; anyway, in order thereby to improve the general health of the child; but still, it would seem as though there should be some way to evaluate more accurately the different findings of a physical examination, so that a more definite predictability could be made concerning any particular irritation as a given cause of enuresis.

Certain it is that many children have phimosis, acid urine, worms, adenoids, or other mentioned abnormality given as a cause, but yet never show any disposition to wet the bed, while often certain patients, even after submission to all this corrective work and in addition having received the usual remedy—belladonna—do not get well. And then we are accustomed to say that there must be some physical source which we have not been able to discover.

Feeble Mentality as an Important Factor

For several years past, I have had considerable experience with children who are more or less mentally deficient, children not merely retarded from physical causes, but actually lacking in brain capacity. These children originally are not in any sense considered as insane or definitely feeble-minded, yet, even the ordinary observer who has had ample opportunity to note their manner and mode of living will conclude that there is something different, that the child assuredly is queer or that it seems to be a sort of general misfit and not adaptable to ordinary methods of education or social life.

It is a fact, well known to those experienced in this line of work, that bedwetting is exceedingly common among these subnormal types, some even having relaxed anal sphincters. It is not overstating the facts to say that fully ten percent of these children are bedwetters.

A prolonged observation of these children and their habits led me to make some observations with regard to the relationship subsisting between mental deficiency and enuresis. As a result, I concluded that the lack of self-control, owing to lack of general brain-force, so common in this class, is a factor of prime importance and must be considered in their treatment.

I do not wish to be understood as making the statement that all bedwetting is a consequence of mental deficiency; I must insist, though, that in a careful consideration of any given case this most important point be kept well in mind by the examiner. He very frequently will find this the key to the problem. Of course, the cure can be greatly aided and quickened by combining with it any or all of the treatments heretofore mentioned.

My records show a series of 75 subjects, ranging from six years to eighteen years (all boys), who have been bedwetters all their lives, many of whom have undergone strenuous treatment by all the usual routine methods. It is but fair to state that only such cases have been included in this series as I have been able to give full examination and treatment. Some have been from the wards of the Juvenile Court and some from private practice, but the same methods were used in all alike.

The Diagnostic Procedure

First and most essential to a diagnosis of causative factors, we must place a careful psychological examination, to determine the degree of mental control we are dealing with. This necessarily involves technical detail, but it needs no further mention here; suffice it to say, however, that this element in the diagnosis, with a view to prognosis, is all-important, while also it is the factor that I have nowhere seen mentioned in textbooks.

Following this, I give the usual thorough physical examination. To one who is experienced in psychological work, the findings of the physical examination are much more easily evaluated than if merely taken by themselves. If masturbation and sexual delinquencies in a subnormal mentality are predominant, one can look more certainly to the genital tract for direct sources of irritation. If such delinquencies are not observed, but general sluggishness, with lack of mental development, one can feel that he must give some close observation to the thyroid and other ductless glands. In certain cases, the general treatment of the mentality alone,

with thyroid, pituitary or mixed extracts, has produced marked results in enuresis, as also general mental improvement.

The Therapy Suggested

After the thorough mental and physical examination and removal of sources of irritation, the child is placed on a 0.1-percent atropine solution, 5 to 10 drops at 4 and 8 o'clock p. m.; while, if he is very nervous, he is given, in addition, at bedtime, 10 grains of sodium bromide in elixir of lactopeptine. Depending on his mentality, he also is given some of the ductless-gland extracts. The treatment is continued for not less than thirty days after the patient apparently is well.

In addition, if he is a mouth-breather and accustomed to sleeping on his back, I fasten a large spool in the center of his back, by means of adhesive strips, in order to remind him gently that he should sleep on his side; for, usually it is when lying on the back that the bedwetting takes place.

This treatment will cure most victims. However, in those stubborn ones who evidently do not try to help, I have forced them to wrap the wet sheet about their neck and to stand at the head of the stairs till all the household have come down to breakfast.

This, of course, is very humiliating, but it has a most certain and positive effect upon the subconscious mind, and often acts as a specific. A few days of this will so impress the subconscious mind that even in sound sleep the child will be able to retain a grip on its sphincters, which otherwise he would not have. This may seem like a queer and almost cruel procedure, but, I can assure you, it is very effective, especially in subnormal children. It merely is making use of suggestion in a pronounced form, the discipline that has made so many converts to our Christian Scientist friends and for the lack of which the medical profession has suffered so sadly. This line of treatment, so neglected by most of us, should be as much a part of our armamentarium as are the drugs and the knife.

In closing, I will merely state that I have yet to see the case that could not be cured when given full opportunity, and the longest time taken has been less than three months, mostly much less. I believe most strongly in removal of all physical defects first, and I recognize the value of proper therapy; but, in addition, I insist that intelligent treatment along developmental and suggestive lines is of the utmost importance in the treatment of enuresis.

The Keystone of Success—Collections

By A. D. BRUSH, Chicago, Illinois

EDITORIAL NOTE.—*This is a topic in which every good doctor who also wishes to be a good business man should be greatly interested—interested to the extent of taking an active part in the business symposium which we purpose to conduct following the publication of Mr. Brush's fine series of papers. Do not wait for further invitation—write us now! Tell us your troubles. Give us your advice. Help us—all of us—as much as you can.*

[Continued from page 434, May issue.]

IN CONSIDERING the following forms and collection schemes, it must be remembered that form letters and other examples can only be suggestive. No hard and fast rule will obtain. Conditions vary in different localities, and for different men in the same locality. As a general rule, unless you know otherwise, you should hold that a man is good pay until it becomes plain that he is not. Consequently, your first appeals should be based upon good-will, friendship, reciprocity, and may be accompanied by some sort of constant reminder. One business man sends with his second statement a card copied after the familiar "I O U," in this way:

U OWE ME
\$10.00
DR. SMITH

Another merchant has a somewhat similar device, made into the form of a pocket-piece about the size of a silver quarter.

You might try pasting the upper edge of your statement to a blotter, cut to the size of the statement, with a notation printed on the lower margin of the bill, reading: "To be torn off when paid." The blotter will be preserved in practically every instance, so that the statement with it serves as a constant reminder until the bill is paid.

Your first letters should hint at oversight as a cause for delay and suggest good-will or reciprocity as a reason for payment. The following forms work out this idea in various ways:

Possibly my previous statement was not received by you or has been forgotten in the rush of other matters.

I rely upon the good will of my clients to make the necessity for these reminders as few as possible, and shall greatly appreciate it if you will make further notices unnecessary by remitting promptly.

In writing to a business man, you might vary it thus:

You undoubtedly have my last statement somewhere on your desk, expecting to send me a check at the first opportunity, but each day the matter has slipped your mind.

Why not avoid another reminder by sending that check today?

Thank you!

Here is one of the "different" type, which always proves productive of results:

"Tempus fugit"

It seems only yesterday that I sent you my bill for services rendered—but the calendar says it was a month ago. This probably will surprise you as much as it did me.

I am counting upon your check in the handling of my expense accounts this month.

For small accounts, use something like the following:

Just out of curiosity, last evening, I figured up my collection expenses and found the cost in your case to be as follows:

Three statements.....	6 cents
Two letters.....	4 cents
Stationery.....	5 cents

Counting nothing for my time, it has cost me so far just fifteen cents to remind you of this little bill of \$1.50—just 10 per cent of the amount due.

Of course, the delay has been unintentional and I am sure that you will now stop further expense to me by promptly remitting. Thank you, in advance.

Here is a letter which presents your side of the case to the neglectful client:

It was David Harum, I believe, who remarked that "a certain number of fleas is good for a dog, because it keeps him from worrying over being a dog."

We all have our worries, imaginary and real. If you could just take a look at the past-due accounts in my books and another at my expense record for drugs, and so on, you'd realize that serving the sick is not all an unbroken romance.

May I look to you for a check by return mail?

How to Handle the Personal Equation

Letters containing appeals directed toward any personal characteristic must be handled delicately. Never tell a man that he is acting at variance with his convictions. Suggest, instead, that, by paying you, *he is living up to them*. This makes it the line of least resistance for him to do so.

Just what to say depends entirely upon the sort of man you are and the sort of man your debtor is. Write him as you would talk to him. Imagine him reading over your shoulder as you write. Then your

letter will be more human, have more of the "you and I" element, which gets results.

Be moderate in your statements and reasonable in your requests. Never, never "bawl out" anybody. The man who is down and out today may be at the top of the heap tomorrow. "I consider your neglect as anything but honorable" and "Your reputation for honor demands that you give this attention without further delay" both touch upon the same human trait, but the first provokes anger while the second produces cash.

To the *conscientious* man, suggest that he has his reputation for honor to maintain.

To the *benevolent* man, suggest that charity begins at home.

To the *proud* man, suggest that he will enhance his standing in the community by maintaining his reputation for prompt pay.

To the *friendly* man, suggest the advantages of retaining your friendship.

To the *economical* man, suggest the addition of interest to the account and his better chance of getting ahead with old debts out of the way.

To the *cautious* man, suggest the advisability of getting out of debt.

To the *ambitious* man, suggest the benefits of a clean credit record.

To the man who always is *hard up* suggest small weekly payments.

To the *deadbeat*, threaten loss of all credit by reporting his name to local merchants' associations or advertising the account for sale in local papers.

Hints About Envelopes

Practically everybody values public opinion, and dislikes to have even the postman know that he is being dunned. An Illinois physician takes advantage of this fact and uses a different-colored envelope for each consecutive notice. His first statements are in white envelopes; the second ones, in buff; third, in pink; and so on. The results secured are gratifying.

A Chicago business man uses the same idea in a different way, by using increasingly larger-sized envelopes, until the final notice is delivered in a large envelope of red color, with the word FINAL printed upon it in heavy black type.

A stamped, self-addressed envelope, accompanied by the suggestion that no letter is necessary—"Simply enclose your check and mail it to me; no letter is needed; I shall understand perfectly"—usually will get prompt action from the man who likes to save.

Persistent, systematic work with the telephone always is effective, especially so in the case of salaried men or those doing business. Try calling up the man at a certain hour every day. His associates soon "get wise," and he will pay up to escape their gibes. Even if he slams down the receiver as soon as he finds out who it is at the other end, you have started a train of thought for the day that ultimately will lead to his paying.

It is not hard to find out when a wage-earner receives his salary, if you know where he works or know his friends. A guarded question, mentioning no names, will get the information. You can then arrange to meet him outside his place of business or at his home as he comes from work. He *can't* put you off, with the money in his pocket.

Are such procedures beneath the dignity of the physician? Why should they be? Some people simply won't pay until they are shown what an *intensely personal* matter their debt is. What is more personal than you, yourself? *You* visualize the debt—permit of no opportunity to dodge. The fact that right and honor is on your side makes your position all the more impregnable; *lends dignity*, rather than detracts. Use your spare time for a few weeks in seeing your debtors personally. It pays big dividends.

Something You Should Not Do

There is a difference between the merely novel or unusual and the bizarre. Each must decide for himself just how far off the beaten paths he may stray. Here again your intimate knowledge of your client is of value. You probably would hesitate a long time before sending any man a card on which was printed:

MAN IS MADE OF DUST

DUST SETTLES

???

It *has* been used, however, and with good results.

However, it is best always to avoid harsh or unkind procedures. Patient, ever-courteous, ever-continuous dunning wins in the end, and leaves no regrets.

When a certain eastern doctor receives a promise from a debtor to pay on a certain date, he mails him, on the day before the promised payment, a leaf from his daily memorandum calendar, dated for the day on which payment is to be made, which reads somewhat as follows:

FRIDAY

May 7th

Pay

Dr. Jones

\$5.00

today

"Making Hay While the Sun Shines"

In a community that had been hard hit, through the temporary closing of the workshops upon which the majority of its members depended for a livelihood, the doctor sent the following letter to his debtors:

Undoubtedly our locality has received a severe financial setback through the closing of the ——— plant.

If this has affected you in any way, please tell me, so that I may know how to handle your account.

If you can arrange to pay me five dollars on account now, I will accept your note for sixty or ninety days (when the shops surely will be reopened) for the rest, so that you will not need to worry about this in the meantime.

The following letter, which appeared in a past issue of *The Medical World*, is a good one, and may, in season, be sent to every debtor on your books, without fear of giving offense:

I have been busy all winter serving the sick. I have neglected my family and my own health in this sacred cause. Now spring is opening up and the pressure upon me is getting less. I have pulled through in pretty good shape, except that my accounts have been sadly neglected. I must now give them immediate attention, and, if my patrons will respond as faithfully as I always have responded to their call, all will be well.

I enclose your statement. Kindly give it attention this week, as I must meet some demands that were neglected while my entire attention was given to the sick. If you can not pay all at present, please pay as much as you can, and also fill out the enclosed note-blank for the remainder due, the note to be payable either in thirty or sixty days, as may best suit your convenience.

I am always glad to see you, Mr. ———, but, since, of course, I cannot always be in my office, it may not be convenient for you to call in person. So, if check or check and note are sent by mail, all purposes will be served promptly.

With all good wishes and always at your service, I am yours,

Very sincerely,

Holidays, changes of season, local events, and so on, can all be made use of as a basis around which to frame letters, appropriate to send to the slowest of the slow as well as to the more recent delinquents. The continued good-will manifested in every letter ultimately shames even the would-be dead-beat into paying.

Bank Drafts

A draft, drawn through the local bank, nearly always is very effective. Its appeal

lies in the fact that every man, whether a depositor or not, likes to feel that he is in good standing with the bank and, consequently, will pay a draft, in order to maintain this standing. Never, however, draw upon a man without first giving him ample advance notice, thereby affording him an opportunity to pay you direct, if he does not want to be drawn upon. In business procedure, we find that the advance notices bring payment from approximately 33 percent, while the drafts themselves bring pay from about 50 percent of the number drawn upon.

Make of your advance notice a customary procedure, not something directed against the debtor personally. The best method is, to place on the statement a rubber-stamp or printed notice reading somewhat as follows:

Your account is past due. If I do not hear from you by ———, I shall assume it your pleasure that

draft be made for the amount, which will be through the ——— Bank.

When you draw, send the debtor a brief notice of the fact. A copy of the draft itself is sufficient; or, you may write like this:

In accordance with my recent notice, I have today drawn upon you, through the ——— Bank, for \$———. Please protect draft on presentation, and oblige.

Draft forms may be procured at almost any stationery store or the bank will supply them. The small item of exchange (10 or 15 cents) which the banks charge really is worth the results secured. In general, I believe that physicians and dentists should make more use of the draft-system. Business firms print on their statements: "All past-due invoices are subject to draft after previous notice." Certainly, there is every justification for the professional man to follow suit.

Evidences of Senile Mental Impairment

By I. L. NASCHER, M. D., New York City

THE cases to be considered in this paper present various phases of senile mental impairment, the subjects of which are octogenarians, their ages ranging from 82 to 88 years. The oldest in this series of eight is a retired minister; of the others, one is a retired merchant, one is a manufacturer still in active business, one is a physician, one is a lawyer, and one is a humble shopworker. There are two women (widows), one living alone, the other living with her daughter. The merchant is married, his wife being over 70 years old; the manufacturer has his second wife, thirty years younger than himself; the other men are widowers. The retired men are decrepit invalids, the others are all active. The shopworker still goes to his shop, walks about two miles every day, and also attends his lodge meetings, in which he holds official positions, several evenings a week. The physician still is in active practice and attends to medical meetings. The lawyer is at his desk daily, unless it is stormy. The old manufacturer potters about in his factory, occasionally taking up a pair of heavy shears and cutting through several thicknesses of cloth, just to show visitors that he still is expert at his old trade, at the same time blaming the dull shears if he fails. One of the women does her own housework, the other spends much of her time at visiting.

More interesting than the physical condition of these eight cases is their mental state. One can form no estimate of anyone's mental deterioration unless the present condition can be compared with his mental condition when at its best; nevertheless, there will be indications of even slight mental deterioration obvious to the stranger, besides many others capable of being recognized by a close observer, although he may know nothing of the former, normal, state.

An Aged Minister

I had not seen the minister before, but had been told that he was remarkably bright and well informed and that he was frequently consulted on matters relating to church history and church polity. In the course of a few minutes' conversation, I discovered that all his mental efforts were concentrated upon the one subject, of his life's work, theology, while in other directions his mind plainly was decidedly weak.

I endeavored to avoid the topic, not knowing enough about it to discuss it intelligently; however, he persisted in talking about church matters. If I asked a question relating to something else, he would either quote scripture applicable to my question, or he would deliberate a few moments, then say, "I don't know," or "I am not certain," or, apparently

forgetting my question, would return to his favorite topic.

Several times during our twenty minutes' chat he asked what my name was, and once, when I interrupted him with a simple remark, he forgot where he left off in his conversation. He took little interest in the affairs of the day, the great European war being passed off with some remark about the power of prayer, while its causes were laid to man's wickedness. It was impossible to keep his attention riveted upon anything except theological matters, and toward the close of our conversation he showed signs of brain-fag, mental confusion, and drowsiness. He was able to recall early events, but not recent ones. He never was strong-willed, but has become a slave to routine, and a slight interruption in his accustomed mode of life causes him to brood for days, even after the cause is forgotten.

Mental Symptoms of an Old Merchant

The old merchant I have known for over twenty years. He retired from his business about fifteen years ago, although he kept up interest in its affairs and visited the place occasionally, until five years ago, when his physical debilities and infirmities became pronounced. His physical condition and his complete retirement from business caused mental depression; he became a hypochondriac, melancholia developed, and he now is in the closing stage of senile dementia.

For hours this old gentleman will sit looking aimlessly at the walls, oblivious to his surroundings and the demands of nature. Occasionally something which affects his senses powerfully (such as the slamming of the door, turning on the light, a blow, the smell of ammonia or the taste of cayenne pepper) will momentarily attract his attention and he will appear to be startled or turn his head in the direction of the source of disturbance, but he exhibits no other evidence of intelligence. Up to a few months ago a certain old favorite air would cause him to wrinkle his forehead as if making an effort to recall something; but this no longer happens. He will sit around, and he can be led, but to all appearance he is unconscious of his existence. His mental condition, of course, is obvious to any stranger.

The old manufacturer I saw for the first time in his place of business, of which nominally he is in charge, although actually it is conducted by his son and a partner. This man is intelligent, takes part in serious discussions, and, whether it be about war,

politics, religion or business, he evidences good reasoning-power.

A Case of Senile Egotism

A prominent characteristic shown is, that he uses superlatives excessively, exaggerates the importance of trivial matters, while his son tells me that he has become exceedingly cautious and suspicious in business matters, which frequently makes it necessary to deceive him—a thing readily done owing to his forgetfulness. He will, for example, repeatedly look up the rating of some old, reliable customers, demand security for goods to be shipped, insist upon security from shippers, from employees, even from the bonding company.

His conversation begins with "I" and ends with "me." There are no delusions of grandeur, wealth or position, yet, there is intense egotism, as made apparent in constant boasting of his shrewdness, skill, strength, powers of fascination, and in other directions. He makes many mistakes in calculations, and he becomes irritable and abusive when his attention is called to these mistakes, but will forget about this display of temper a few minutes later. His son says that he occasionally laughs and cries without apparent cause or else for the most trivial reason.

Formerly a strong personality, he has become submissive, is easily led from his purpose, and spends much time in trivial tasks, such as picking up remnants of threads, straightening out boxes, dusting off his desk, and such like; or else he will look up accounts, reports, ratings, and papers, dozing off after a few minutes of such work. His mental impairment is recognized by those who know him; it would not be recognized, however, by a stranger, unless when the man began to speak in exaggerated terms of his strength and other qualities, or unless purposely close observation were made.

Mental Failure of a Lawyer

I have known the lawyer for a number of years and have been able to observe the progressive impairment of his mental faculties. This can clearly be demonstrated by a comparison of letters written five years ago and recently. The former are coherent throughout, and the last line is written as carefully as the first. A recent letter on a similar subject begins rationally and for a few lines it is coherent. After that the letter becomes rambling, introducing matters of fifty years ago that have no bearing upon the subject, while toward the end it becomes an

uncipherable scribble. The same now occurs in conversation. Speaking rationally at first, he soon becomes confused or rambles, or else he grows reminiscent, while relating the same episode over and over again until his audience leaves him or he himself becomes exhausted.

Formerly this lawyer was reticent about himself; now he has become extremely egotistical. Thus, recently, when celebrating some anniversary event, he wrote to his friends requesting them to send him congratulatory letters which he could read at a meeting and then publish. He believes that he still is as competent as ever in his profession, that he will live to be 100 or 120 years, and that he is in perfect health.

During the past few years, he has become associated with various cults, such as the Spiritualists, Theosophists, and others of that kind. His office is in fearful disorder and his desk is littered with new and old books, journals, papers, clippings, and photographs, which his clerk says have been lying there for months, he having been forbidden to touch them; yet, the old lawyer makes no attempt to restore order. A stranger speaking to him for a few minutes on law matters or one of his hobbies will find him exceptionally intelligent; if, however, the conversation becomes prolonged, his mind begins to wander, so that his mental impairment becomes obvious.

The physician, whom I have known for many years, is one of the remarkable old men of the day. In practice, in discussions upon the affairs of the day or upon medical subjects, his mind is extremely clear and alert and works as rapidly as it did years ago. He is quick at repartee, instantly grasps the import of a scientific statement, and has kept abreast of the times, and the only evidence of mental deterioration he has evinced is a more rapid brain-fag. He has a very retentive memory, not alone for early events, but for recent happenings, and recent books and periodicals, recalling names and dates, which are usually first forgotten in senile mental impairment.

In late years, he has become more serious, less aggressive, less energetic, his contributions to literature are not as elaborate nor as frequent as formerly, but his interest in life, in the affairs of the day and in medicine is as keen as ever.

The Last of the Sextette

The last one of this male sextette has been my patient for nearly thirty years. A few years ago he was pensioned and for two weeks he enjoyed a vacation. He then tried to get other work, but when he found that nobody

wanted to employ a man nearly 80 years old he became depressed and said he thought he was fit only to die. His firm reinstated him and he became again cheery and happy. Soon afterward, the senile climacteric occurred; he became moody or elated without cause, at one moment complaining of his family's neglect, the next moment praising their solicitous care and attention. During this period, which lasted several months, he had occasional delusions of persecution; he also frequently was absent-minded.

Since then there has been a slow progressive mental deterioration which the close observer would recognize. It takes a few moments before he grasps the import of a question and before he can frame a reply. There are moments when the mind seems to be a mental blank, this state lasting perhaps two or three seconds. During this short period his facial expression is that of the idiot, the corners of the mouth droop, the eyes have a dull stare, the cheeks puff out. He never has been a deep thinker or a close observer, while, aside from a superficial interest in the affairs of the day, his interests were centered in his family, his simple work, and lodge matters.

Now interest in his work has diminished and he goes to the shop through mere habit; his family affairs give him little concern, and the only interest he still has is in his lodge work. This and his petty ailments occupy his entire thoughts. He can discuss, so far as his limited education goes, the events of the day, but he soon tires of such discussion and I have known him to fall asleep while he was talking. He has a fairly good memory for recent events in which he participated or was otherwise interested; other events, such as he reads of, are immediately forgotten. This case illustrates the typical mental and physical deterioration that involves all the organs and tissues and their functions after the senile climacteric.

Mental Symptoms of Two Old Women

The older of the two women has been living alone since the death of her husband nearly twenty years ago. Before his death, she was hospitable, sociable and charitable, but soon after his demise she became irritable and suspicious, quarreling with one friend after the other, until they quit her, and even her children could not bear her peculiarities. For the past ten years there has been coming on a slow mental impairment. Her interests in life have become restricted, until today she cares about nothing except her life and her little home, including a cat—her sole com-

panion. She goes out every morning for a few minutes to buy food. Aside from this, she does not leave her house, admits no one to her rooms, and in fact leads a hermit life.

I saw this woman recently, when she was ill, and observed marked mental impairment. She had a simple intestinal colic, but she was convinced that she would die and gave me some extraordinary directions about her funeral. It was impossible to divert her thoughts from this notion, and she repeatedly made me promise that I should not inform her children (whose names she could not recall) of her death.

I saw her again on the following day and found that she had but a dim recollection of my call the day before, had entirely forgotten our conversation, knew nothing of the affairs of the day and did not care to hear any news, her health and the health of her cat being the only things she wanted to talk about. A neighbor informed me that she sometimes walked out absentmindedly, and on several occasions neighboring shopkeepers were obliged to show her the way home. Her children are now trying to induce her to enter a home for the aged.

The other woman is the antithesis to this one. She is 82 years of age, is fond of society, especially of the young, and tries to appear young by resorting to facial artists, hair-dressers, beautifiers, and dressing in youthful garments and conducting herself like a young woman. She takes seriously the joking propositions of marriage made by young men who know her weakness and even discusses the eligibility of her proposers—ignoring the ridicule by others, which she ascribes to envy.

This old lady's interests are those of the younger generation, including woman suffrage, riding astride, mother teachers, female invasion of masculine occupations, and all that. Her conversation consists of gossip and chats about fashions, young men, and her health. Her memory is weak, she loses her way, frequently forgets where she is going, oblivious of the fact that she carries a memorandum-book in which she notes methodically all her appointments. When discussing woman suffrage and similar serious subjects, she soon becomes confused and either turns the subject or refuses to continue. On the whole, her conversation is rational and coherent, although inappropriate for a woman of her age; and to the casual observer she appears giddy and silly. She was always fond of society; until two or three years ago, however, her associations were with

persons near her own age and station, and she dressed and acted accordingly.

Those who come in daily contact with an aged person do not notice the gradual mental impairment; still, in time they will realize that such a one is growing peculiar and cranky, forgetful, careless, and inattentive, developing sudden whims and odd hobbies and often causeless fears and worries. They find that the aging person cannot accommodate himself to modern ideas and methods and holds on to lifelong habits; and then they say he is oldfashioned. If they find fault with him, he complains of ill treatment and neglect, becomes despondent, and thus the foundation of oikomania—which is so prevalent among the aged—is laid. Moreover, there generally is mental depression, owing to the petty discomforts, the realization of diminished economic value, and the knowledge of the rapidly shortening span of life.

Early Senility, in a man of Sixty

I will add one more instance, a case which I have been able to follow day by day for many years and in which I made notes of the mental changes as they became pronounced.

This man at the age of 50 was prominent in fraternal organizations, a forceful speaker, a systematic reader, genial and popular. He made an excellent appearance and was vain of a fine head of hair and long well-kept whiskers. About five years later, a few gray hairs appeared and he began to use hair-dyes; also, at about the same time he began to use aphrodisiacs. It was then noticed that occasionally he was morose, and his employees complained that he was becoming more exacting. In lodge meetings he frequently discouraged frivolity and levity, although formerly he had indulged in them himself.

This man was about 60 when I first began to make note of his mental condition and observed the little peculiarities that pointed to mental impairment. He still used hair-dyes and aphrodisiacs and tried to get rid of wrinkles, but he was noticeably careless in dress. He was serious, exacting, precise in speech.

His interest in the affairs of the day began to wane, although he still displayed great interest in lodge matters, where his strict rulings in cases where common sense and sentiment justified a deviation from parliamentary practice made him unpopular. He did not take part in discussions as often as formerly, but when aroused or challenged he exhibited his oldtime vehemence and logical reasoning, albeit without those bon-mots and

witty remarks that marked his speeches in former times. He also began to give evidence of weakened memory and was frequently obliged to look up authorities and decisions which he formerly could quote offhand.

Five years later, the mental impairment was visible to the close observer. He still used hair-dyes, but his hair and whiskers were getting thin and he frequently ran his fingers through the hair, pleased when no hairs came out and dejected when he found a hair or two adhering to them. He now was frequently depressed, took little interest in the affairs of the day or even in lodge matters, which formerly had engrossed his thoughts; only something of great importance and affecting him personally could arouse him. His mind was now absorbed in his shop. He grew indifferent to his family, had little to say at home, became a slave to a routine mode of life, which only personal discomfort could induce him to break. His business methods and machinery were antiquated, but he would make no change, although his business was thereby being conducted at a loss, while he could well afford to modernize his plant.

At this point his memory had become perceptibly weak and he could not reason clearly; however, he recognized some of these changes in himself and endeavored to hide the defect by avoiding conversation. He exhibited an unreasoning obstinacy in the conduct of his business and in his routine habits; yet, in other respects a child could lead him from his purpose. This mental impairment proceeded, and by the time he was 70 it was plain even to the stranger.

Shortly before his 70th birthday, physical debility and the burning of the building in which his shop was located forced him to retire from business. Before this happened, he went from his home to his shop and back to his home, like an automaton, and on several occasions when I met him on the short walk he passed by staring ahead or, if I stood in his way, he passed around, seemingly unconscious that there was an animate obstruction in his path. When I spoke to him on these occasions he appeared startled, as if awakened from a reverie.

His business now decreased and he spent much time over his books, filled sheets of paper with figures which seemed to have no relation to his business or to anything else; nor would he explain what they referred to.

He went to three banks in which he had accounts, shifting his accounts in such a way that it was not clear how much he had, and after the fire, in which his books were destroyed, it was impossible to get any idea of the state of his business affairs. After the fire, he was apathetic, took no interest in anything, walked, absentminded, to the burnt building and with his keys attempted to open the doors, and it would be necessary to show him the burnt interior, before he could realize that he could not enter. At home he spent hours jotting figures in a notebook, which he hid about his person.

By speaking to him continually about the coming celebration of his 70th birthday, it was possible to arouse in him a continued interest in the affair, and he even prepared a speech, the manuscript of which showed errors in spelling, omission of words, introduction of foreign matter, numbers, and scrawls. He tried to memorize the speech while walking absentmindedly through the streets and in his rooms, but evidently he did not get beyond the first two or three lines. When the celebration was on and congratulatory speeches were being made, he kept mumbling to himself, rehearsing his speech, utterly oblivious to his surroundings. When he was prompted to arise he repeated a few of his lines, then dimly realizing that he could not do what was expected of him he broke down and wept, only to be fast asleep a few minutes later. The mental decay now proceeded rapidly. Although I had been with him daily for years, he forgot my name, and later he forgot the names of his wife and children. Eventually it required prolonged effort and prompting before he could remember who I was, and still later his mind became an absolute blank.

Memory, reason, will, emotions, all had vanished, and he became an absolute dement, lacking even the fundamental instinct of self-preservation. For several months before he died he kept up an unintelligible jabber, did not recognize anyone, powerful sensory impressions failed to produce a response, and toward the end his existence was purely vegetative.

In this case, the excitement connected with the burning of his place of business, as also the birthday celebration, probably hastened the final breakdown; still, in its entirety, this is a perfect case of progressive senile mental degeneration, from strong mentality to complete decay.



Out California Way

The Story of a Doctor's "Wander Year" .

By HENRY B. HOLLEN, M. D., Venice, California

EDITORIAL NOTE. There is absolutely nothing "medical" in this fascinating article, but there is much in it that will appeal to every doctor who may long for a delightful vacation in our "American Riviera," such as Doctor Hollen is experiencing. Even if you are not planning to go to California this year, you should read this "story."

WHEN the administration stopped issuing passports to European countries, thus putting another damper on transatlantic travel, the newspapers of the West Coast crowed loudly. For, it meant the turning back of the golden stream that, up to the present, has flowed copiously into foreign coffers—a part of it at least. It meant that the daring ones who would go to Europe anyway, war or no war, were actually to be prevented from crossing the gangway, unless they could prove they had business on the other side. This year, seekers after pleasure and new sights must seek them in America, to stay at home, under the circumstances, or go south. But a great many, habituated as they are, in common with the birds, to light out somewhere in the springtime or early summer, will betake themselves to the West—and to the expositions.

And they are needed to make up the crowd which the West has been awaiting. So far, the two expositions have not been any too well attended. The looked-for crowds have not arrived yet. The opening days were good, both at San Francisco and at San Diego, and so were one or two of the special days. But, on the whole, the promoters are far from feeling satisfied. Of course, it would be very poor business policy to express any dissatisfaction publicly; so, they are keeping upper lips stiff and uncommunicative, hoping for a good, big crop of summer tourists. The truth, nevertheless, is that the attendance, since the opening dates, at both places has only been about half of what it should have been, and probably would have been in any normal year.

It Is an Off Year

But, then, this is decidedly an off year. People are not traveling as much as in previous years. And those who are traveling are not spending as freely as formerly. So it seems. They take cheaper rooms at the hotels. They patronize cafeterias. They are chary with tips. They are buying few souvenirs. They haggle over the price of things. On all sides

you can see small merchants to the trade and caterers to tourists looking very peeved.

The foxy Armenian rug-seller can get no one to buy his stuff or even to look at it. He is perplexed at this unwillingness on the part of the public, which, in more prosperous years, came readily to him with its money. Now he must post an impassionate appeal on his window for customers; in bold letters, he cries out that he needs cash badly and, to get it, is willing to sacrifice his stock. The enterprising Japanese finds it extremely difficult to awaken interest in his showy oriental merchandise. Those who condescend to look refuse to purchase. It is terrible! And the rent goes on just the same. In desperation, he will hire an auctioneer next week, to try his persuasive mouthings on the passing populace. Then there is the real-estate man. He certainly is having a good rest. He is lucky if he can make one turnover a week. They come not to his office. Those whom he succeeds in interesting he must go out into the streets to find; it has actually come to that pass, when he is obliged to bait customers with promises of a free ride and a picnic-lunch. He has properties to sell; he must, somehow, get people out to see them, depending upon his salesmanship to close a deal.

The other day I came across a restaurateur whom the dulness had driven frantic. He had put out, in front of his place, a large sign with this query on it:

"For God's sake, don't you ever get hungry?"

The situation here is about as depicted in the foregoing. There are signs of commercial depression everywhere. In Los Angeles, one can count hundreds of vacant stores. Lapses into bankruptcy are frequent. But, I am wandering. Let me get back to the expositions.

This condition of depression, which is general, goes a long way to account for the light attendance. And also the war, which prevented some of the intending exhibitors from filling contracts and greatly delayed

others. No doubt many people who could afford to travel this year, and fully intended to come, changed their minds at the last minute, fearing too much in the way of exhibits would be missing. But nobody should allow himself to be so influenced to stay away. There is aplenty at both expositions. They are wonderful shows, worth girdling the earth to see.

The exposition grounds at San Diego were anything but congested in April. Said a resident to me soon after my arrival, when I expressed the hope that the crowd would not be too large for comfortable sightseeing:

"A crowd, did you say? Not a bit of it! That is just where you want to go to avoid a crowd."

And so it proved to be. No need was there to step on other people's heels; no need for jostling. On the contrary, I found it an ideal place for aimless rambling. I could go as slowly as I liked, as leisurely as I chose. There was always a clear path to walk in and always a seat vacant in which to rest when wearied from too much walking. No crowds—no disturbing noises—no unwelcome bickerings.

You Must See San Diego

Here, at San Diego's exposition, on its ample mesa, you may be far from the maddening bustle of the city and its irritating obstructions; in ten minutes you may leave all that behind you and, once inside the gates, enjoy a most reposeful day. You may commune with nature, alone, on many a pleasant walk. You may listen to the inspiring strains of the huge organ, resting under the blue sky, in the warmth of the glorious sun. You may watch the parade of the mariners, preceded by their spirited band, on the Plaza de Panama. Whatever you choose to do you may do unhurried and undisturbed.

Here is one continuous feast for the eyes. For beauty of surroundings, for natural attractiveness pure and simple, nothing I have seen in this country or in Europe surpasses it. Do not look here for a gigantic affair. You can walk over the whole of it in a day. There is no immense display of exhibits to be seen here. The only foreign exhibitor is Japan. It is the out-of-doors you will enjoy at San Diego. You will bask in the matchless sun. You will breathe the invigorating sea-blown air. You will see such a profusion of flowers—of palms—of peppers—of lemon-laden trees—as will startle you. You will find interesting walks to take; charming nooks to linger in. The quaintness of the buildings, one after the other, will

please you. All is artistic and harmonious exteriorly. The old Spanish mission style of architecture prevails. And all around you is sun-drenched. Verily, here is a scene you will not soon forget, a bit of earth re-made on an Arcadian pattern.

My best advice to those who intend coming west this year is, not to skip San Diego, just because it happens to be the lesser attraction. By lesser, I mean in point of size. To do so, would be a grievous mistake, especially for those approaching the coast at Los Angeles, which is only a hundred and twenty miles north. For, San Diego has what San Francisco has not: the natural tropic beauty that the latter cannot duplicate except under glass, and a climate that it cannot duplicate at all. You will do well to prolong your stay at San Diego, instead of allowing yourself to be hurried northward by promises of a bigger show.

San Diego a City Beautiful

Apart from the Exposition, San Diego is the beginning of a city beautiful. To my mind, it is far ahead of Los Angeles in everything except size. You will see streets that are wide and well kept; blocks, substantial and pleasing to look upon; and parks that are wondrously pretty. Here is truly a city—begun! What a splendid location it has on that grand land-locked bay, promising one of the best harbors in the world. Across, within plain sight, looms up Coronado Beach, and behind are the mountains. The Mexican border is seventeen miles to the south. As far to the north lies that pretty seaside place called by the pretty name of La Jolla, where stretches of sand alternate with rugged rocky cliffs.

It is seldom that warships are absent from San Diego harbor, and the middies are usually found upon its broad streets enjoying shore-leave. And frequenters of the waterfront see, many a time, birdmen ascending from the aviator's field across the bay; the food-hunting seagulls circling low and lazily; porpoises emerging from the shimmering blue waters.

San Diego even now has the best of everything—nearly. She boasts the finest theater west of Chicago. Not a park that I have seen in this country rivals Balboa Park. Here are the largest and most pretentious cafeterias extant. Here is a hotel better than any in Los Angeles, built by the son of General Grant and bearing his name. Also they have in San Diego a railway station, of the Santa Fe line, which puts to shame the terminals of the boastful metropolis.

Visitors from the East and Middle West will find some of California's claims substantiated, and some not. So far as climate goes, question not that the very best all-year-round climate is here, particularly in the vicinity of San Diego. The officially compiled temperature-record for a dozen years back reveals the fact that this section has a climate virtually identical with that of the most favored spot in Europe, that is, the Riviera, at Nice and Mentone. Only, there is a little bit more wind here.

The City of the Angels—and of Churches

Opinions differ; mine is, that Los Angeles is mostly to be commended as the point of departure for the several beauty-spots adjacent to it. A score are within easy reach—by means of an excellent electric trolley system. In half an hour you can slip away to the beach cities—for surf bathing, for fishing, for boating, or simply to get the bracing seabreezes. Or, you can descend into the valleys, where golden oranges bend the trees and roses bloom in profusion. Or, you can run up to snow-capped mountain-peaks. Or, visit the tidy communities on the desert's edge; the millionaire colony at Pasadena, which will be found just as advertised.

Although Los Angeles boasts half a million people, it is not a city—yet. As anyone can see who has been about much, it lacks metropolitanism. Which goes to show that it takes more than mere population to make a city. No—Los Angeles is as yet nothing but a town. It is a large town, to be sure; it is a church town; and it is a good, healthy place to live in.

Those who feel at home in a pew will feel at home in Los Angeles. Here are tabernacles galore—the million-dollar skyscraping kind. Here are churches looking extremely prosperous. Here are evangelists drawn from remote parts, regardless of expense. Here are ministers of the gospel advertising in the newspapers for hearers as merchants advertise for customers. There are so many churches that competition is keen.

A few years ago, Los Angeles "threatened" to become a city. It took on metropolitan airs. It began to be very, very wicked. But all these tendencies were quickly suppressed. A police chief was installed, who proceeded to make the town as good as its name. He fumigated it—scrubbed it—polished it—made it look very clean. When he got through, it was declared to be chemically pure. But, today, this same guardian of morals is in public difficulty; he is being tried

before the grand jury for moral turpitude, involving the delinquency of one young girl and the dependency of another. The newspapers are full of it. A lot of dirty linen is being hung out. And the good citizens view it with surprise.

Attractions Along the Beach

The traveler can well afford to wait till he gets to San Francisco, to enjoy the café life and other diversions of this kind. Here, around Los Angeles, is the country to enjoy. And the beach—it is beautiful between Venice and Santa Monica. These two places are connected by a broad cement promenade and a clean sandy stretch that is a continuous delight to surf bathers. The promenade is four miles long. The Venice end is by far the liveliest, with all sorts of attractions, among them an Italian band of twenty-four pieces, under the directorship of Signor Cesare de Monaca. This band plays every day, afternoons and evenings. This lively suburb was planned and developed by one Abbott Kinney, who made his money selling Sweet Caporal cigarettes, the popular brand of our boyhood days. He patterned it after the famous European prototype. Here are canals and gondolas, squares and colonnades, all looking quite foreign. An immense amusement-pier runs far out into the ocean—an avenue of fun and frolic of every description. Further on, in the Santa Monica direction, is a second one, fully as large, with the municipal dancing-pavillon at its seaward extremity. And still on, beyond, is the Nat Goodwin Café, which at night is a blaze of white light and the destination of many joy-riders.

Some of the Beaches

Santa Monica proper is a fine residential spot, with the ocean in front and the Sierra Madre range of mountains on the north of it. No finer townsite have I seen anywhere. Along the shore is a park in process of development, which will be two miles long when completed—a crescentic band of grass set with handsome palms and peppers and geraneums. This coast has a future. With age and finish, it should rival the celebrated Mediterranean Coast. Nature has done its part; it only remains for man to do the rest.

Many people have heard only of Long Beach, perhaps because it is the largest seaside suburb of Los Angeles and the most widely advertised. It claims forty thousand permanent residents. But the visitor will be disappointed in Long Beach, if at all discriminating. On the way, he will see many

ugly spots and, having arrived at his destination, he will find a water-front that is exceedingly untidy and cheap in character.

Hotel Accommodations and Railroads

In California, hotels, as a general thing, are good, with rates more reasonable than elsewhere in this country. This I found especially so in San Diego, where they have provided hotels aplenty. And no just complaint can be made as regards the run of accommodations in San Francisco. The exposition authorities of both cities exacted from hotel-keepers agreements not to raise rates this year, and for the most part these agreements are being lived up to. But some who are more greedy than honorable are asking an advance. Besides, in general, apartments rent for ten per cent more than usual.

At the principal Los Angeles hostelrys, rates have been raised quite materially. The crowd is here, going north and south, and while passing through is being made to disgorge. But, there are places in Los Angeles where one can stop at small expense. For instance, the two tabernacles—the Bible Institute and the Trinity—both new, are taking guests, at rates of seven dollars a week (room only), single or double, and a nominal advance by the day. Both are centrally located. Smoking is proscribed here; also cardplaying. And the sexes are isolated. You get a good bed, a clean bath, and plenty of light.

From Chicago, as also from St. Louis, several routes westward are available, at the same cost. For comfort, the Santa Fé is my choice. For scenery, take the Denver and Rio Grande from Denver or Pueblo to Salt Lake. From there, the Salt Lake route to Los Angeles, or the Western Pacific to San Francisco. Either is scenically rich. A longer trip is that by way of New Orleans on the Southern Pacific and connections. This affords an opportunity to see both New Orleans and San Antonio, although the second has little to tempt a stopover. But further on is El Paso, which is well worth seeing; from that point, one can have a look into Mexico.

Many come here with a misconception of weather conditions and suffer discomforts as a consequence. Bring warm clothes with you, including an overcoat. Evenings, as a rule, are cool on this western coast, and wraps are in constant demand. Even in midsummer they will be needed in San Francisco, not only at night, but in the daytime when the blustery tradewinds spring up. The balmy nights of Florida and Cuba, familiar to win-

ter visitors to those parts, are not here. Just as soon as the sun goes down, it turns cold. And when the sun is blanketed by clouds it usually is cold; even when the sky scarcely is flecked, chill winds may more than neutralize the sun's rays.

San Francisco Beats All

The visitor will find the exposition at San Francisco fully up to expectations. For large proportions, for shimmering electrical effects, for absorbing cosmopolitanism, this show is the best of them all. Joe Cannon was there last month with a congressional party. These were his words after spending a day on the grounds:

"Three times beautiful! I shall be eighty-one next April. Thank God I have lived to see this wonderful exposition! No adjectives can describe its immensity and grandeur. It is a sight worth coming the ends of the earth to see."

The Side Shows

Those who are fond of music will find treats at both expositions. At San Diego is that huge organ donated by Spreckles and played by Stewart. There is a daily concert by the band of the Third Artillery Corps, U. S. A., which is encamped on the grounds. And, right now, Creatore's band is playing an engagement. At San Francisco music may be heard from morn till night. At noon there is an organ recital. Max Bendix is there with his splendid orchestra. A French band, under the baton of Gabriel Parés, plays every day; also the U. S. Marine Band; also the Philippine Constabulary Band. Everything else at San Francisco is on the same generous scale.

Both expositions have their pleasure streets, as all similar shows have had before. But at San Diego this feature is not a great success. The spirit of revelry by night—the abandon—the hilarity—which we expect in such quarters is not on the Isthmus. You must go to the Joy Zone of San Francisco for that. There you will find the bally-ho and such other naughtiness as has got by the police censors of that metropolitan community. To be sure, we have at San Diego the Hula-Hula dancers, but they will be found to conduct themselves as perfect ladies. And there is Underground Chinatown: this is a show which little boys and girls may witness with impunity. It is funny and instructive, with hardly a suggestion of any of the deviltries that slant-eyed celestials are supposed to be up to at times.

To me, it seems especially regrettable that the San Diego exposition is not better attended. It certainly deserves twice the number of people it is getting. The promoters have lots of credit coming to them for attempting such a stupendous show and succeeding in the attempt, without any federal aids whatsoever. As I have already said, there are almost no foreign exhibits, but the exhibits of the southern California counties, in their several buildings, will delight the visitor. It is a *mélange* of fruits and fruit-products wondrous to behold. And there is a citrus-grove in full bearing, the trees of which were planted only two years ago.

The rapidity with which Los Angeles sprang up caused the whole world to marvel. It seemed magical. Yet, we can account for it easily enough. It was the favoring climate. It was the alluring landscape. It was the man of capital, coming from the East to spend here his remaining days and incidentally investing his money here. It was the oil that gushed from the earth. It was the semitropic sun. It was the fertile soil, needing only water to produce. It was all of these things together that made this coast, and will continue to make it.

The Golden State

Few realize the vast area of this state—the Golden State. You can put the states of

New York, New Jersey, Massachusetts, Maine, Vermont, New Hampshire, Connecticut, and Ohio in it and yet have considerable acreage left. Those who visit it at this season of the year (spring) cannot fail to return well impressed, especially by the southern half. Most people go away feeling they would like to come again some day. The fruits of Florida may be sweeter, but, for flowers and diversity of scenery, for comfort and wellbeing, California comes first. This is the land of flowers; they have in this section a wealth of color and scent not attained elsewhere within our national confines.

A state so benignly favored by nature cannot fail to recover from periodical depressions, such as the present one. What California needs is, more actual tillers of the soil and people of the constructive type having money to work with. Of tradesmen, clerks, carpenters, doctors, lawyers, she already has superfluity.

A fact not generally known, a quite interesting one, is that eighty or ninety percent of the world's moving-picture films are produced here in California. This is because the sunlight is exceptionally good, winter and all the year; and because the natural scenery is so diversified. A setting for almost any picturization can be found in an hour's time—only a few miles away from the studio.

THE TEETH

By James A. DeMoss, M. D.

What gems, what glittering gems,
The parting lip reveals,
Within the facial cavern set,
Guarded by crimson shields!

They are enameled jewels rare!
More precious, where they stand,
Than whitest pearls or costliest stones
On breast or jeweled hand.

These ornaments aglow with light,
Which charm and beautify,
Unconsciously we constant wear—
False charms they well defy.

Oh, guard them well and keep them clean,
Nor tarnished words befool;
Nor unclean thoughts in speech concealed
Pollute and stain and soil!

Oh, never let defiling weed
Enter, to mar and dim
Their glittering, splendid whiteness rare,
Gem beauties, bright and trim!

They minister to health and life,
They watch the open door,
They speed our garnered nutrient wealth
To waiting bins in store.

Teeth beautify the facial form;
They set with character;
They feed us with the living bread,
They form our words of cheer.

They are our strength, these picket-walls,
Which guard life's entrance well;
Secure they make the inner halls
Where life's great functions dwell.

What Others are Doing

ANOTHER INSTANCE WHERE PSORIASIS WAS CURED BY EMETINE

In the March number of *CLINICAL MEDICINE*, we printed an abstract of an article contributed by Dr. W. R. Chaplin to *The Dental Cosmos*, in which he reported the prompt disappearance of psoriasis following the treatment of pyorrhea with emetine. Now Dr. C. T. Pearce, through *The Lancet-Clinic* for April 24 (p. 474), reports another case of psoriasis successfully treated with this remedy.

The patient was a woman who had been a victim of psoriasis since early childhood, and, when seen, had a coexistent pyorrhea. Doctor Pearce gave this woman eight hypodermic injections of emetine, each containing 1-2 grain of emetine hydrochloride in 1 Cc. of distilled water. The injections were given semiweekly, without producing nausea. "The influence of this treatment upon the skin eruption," Doctor Pearce writes, "was marked after the third injection, and the body now is entirely clear. I have a second case under treatment, and improvement already has begun, following four injections of the same amount of emetine."

This report is so interesting that we hope other physicians will be impelled to give this method of treatment a trial.

IS MIGRAINE LIKE EPILEPSY?

Is there an analogy between epilepsy and what we call sick-headache? W. K. M'Coy, writing in *The Lancet-Clinic* for April 24 (p. 474), expresses the opinion that these recurrent headaches are the expression of a true intoxication that in several respects show a similarity to epilepsy.

Thus, for instance, there usually appears, in sick-headache, a distinct prodromal stage, and the victim of these recurring headaches learns to regard this symptom with suspicion. Then, when the headache is fully developed, there is a stage of lethargy—of mental torpor—similar to the stupor following grand-mal. Vomiting is a frequent concomitant of sick-headache, as it likewise is in the postconvulsive

stage in many cases of epilepsy. Sick-headaches are best relieved, and frequently may be aborted, by prompt purgation; and the same seems to be true of epilepsy. Furthermore, some of the victims of recurrent headache have proved to be subject to intestinal stasis. In fact, these patients are constipated all the time. In this respect, again, they exhibit a resemblance to epilepsy.

In view of these facts, and in the light of the experience of Dr. C. A. L. Reed, Doctor M'Coy suggests the desirability of looking to surgery for the relief of the underlying cause of these cases of migraine—a cause which is to be found in the intestinal canal. The oil treatment of the constipation also deserves trial.

BACTERIN TREATMENT OF PNEUMONIA

The principal reason why bacterin treatment has not proven more successful in pneumonia, according to W. H. Wynn (*Brit. Med. Jour.*, Mar. 13, p. 458), is, because it has been resorted to mainly as a last resort, in cases which are not doing well under other treatment. Wynn declares that, if a vaccine is of any service at all in this disease, it should be employed as soon as possible, in order to limit the intensity of the infection and prevent the occurrence of grave symptoms. His own practice is, to administer the bacterin as soon as possible after the onset of symptoms, so as to insure an accumulation of antibodies in the blood, and, consequently, to have them present at the time when they can do the most good.

Wynn's opinion is, that during the stage of firm consolidation little can be expected from vaccine-treatment, so far as the affected parts of the lung are concerned, since the emigration of leukocytes and the clotting of fibrinous exudate in the alveoli impede the access of antibodies from the blood.

Doctor Wynn recommends the use of a stock vaccine made from highly virulent strains of pneumococci; with such a vaccine he has obtained some really remarkable results, the most striking being in patients who

were injected on the first and the second day. In these, there was no doubt about the course of the disease having been greatly modified. In no instance, even when the first injection was given as early as ten hours after the initial rigor, was consolidation prevented. Nevertheless, the unusual spectacle was seen, of a patient having a large portion of his lung solidified, but presenting normal pulse, respiration, and temperature, and absence of any characteristic symptoms.

In other words, bacterin-treatment prevents the toxemia characteristic of the disease, providing it is given sufficiently early; but, it does not prevent pulmonic consolidation.

IMPROVED SPLINT, ESPECIALLY FOR FIELD-HOSPITALS

Naturally, European medical journals are filled these days with discussions relative to military-hospital work, and, so, Doctor V. Bayer, of Munich, describes (*Muench. Med. Woch.*, 1914, p. 1986) what he considers an improvement in the splinting of limbs that have to be firmly fixated—one of the important field activities of the field-surgeon. Plaster-paris bandages are best for this purpose; however, strong objections obtain against the spiral winding bandage, inasmuch as, under the circumstances, the attending surgeons change frequently, and, consequently, the supporting bandage needs must be as frequently removed. The disadvantages are plain. But the need of easy removal not infrequently confronts the surgeon in civil life; hence, his interest.

Doctor V. Bayer's method of constructing a cheap and durable accurately fitting, stout, removable hollow splint, which has served him to good purpose, is as follows:

The material employed is wool felt. Cut a strip from 4 to 7 inches (according to size of limb) longer and wider than the splint is to be. Then cut a second strip somewhat shorter and narrower than the first one, yet larger than the finished splint will measure. Thoroughly soak the two pieces in water. Lay the larger strip of felt upon the place to be supported—say, the leg—then rub into it plenty of gypsum magma. Now superpose the smaller felt strip in such a manner as to leave even borders of the lower protruding all around. This in turn is rubbed in with the plaster-paris paste. Of course, this covering is molded against the body. Now fold backward upon itself the four sides of this double felt layer so that the contrivance is of the di-

mensions in length and breadth as intended, first, however, smearing an extra liberal amount of the gypsum along the line forming the edges of the splint.

These borders of four-fold thickness of felt, after hardening of the plaster-paris, yield a stout support, that can be removed at will, while the edges cannot laminate; however, for special reasons, the lateral edges can be still further strengthened by inserting, before folding back, narrow soft-iron bands. Of course, windows can be cut into the material at any desirable point before applying the plaster-paris paste.

To fit the popliteal space, the patient is turned over. For constructing an arm-sling support, the felt strips are impregnated all over with gypsum paste, applied to the arm, the borders folded upon themselves, then the whole is wound with a mull bandage against the arm and supported from the shoulder. Such a contrivance, firm, nonelastic, accurately conforming, may be finished in the brief space of four or five minutes.

ANTITHYROIDIN IN EXOPHTHALMIC GOITER

In opposition to those who deny remedial value to Moebius' antithyroidin in cases of exophthalmic goiter, Doctor Schmalz, of Dresden, told the Society of Therapeutics and Physiology, of that city, that he himself has witnessed excellent results from the use of the milk of thyroidectomized goats, originally, and afterward from the antithyroidin. He added, though, that, when the disease is found not to yield after, say, the employment for five or six weeks of approved medication, operation should not longer be delayed.

PUERPERAL ECLAMPSIA AND GLYCEMIA

Starting from the theory that functional disturbance of the liver lies at the bottom of puerperal eclampsia, Dr. Bentlin (*Proc. Med. Soc. of Koenigsberg*, reported in *Muench. Med. Woch.*, 1913, No. 15) concluded that particular attention should be directed to the presence of sugar in eclamptic persons, since the metabolism of the carbohydrates here is prominently concerned.

Investigations conducted by him have shown that the normal percentage (average of about 0.82 p. c.) of sugar in the circulation remains undisturbed in menstruating as well as in gravid women. However, when labor has

set in, a hyperglycemia occurs, which the author attributes to the intense muscular exertion, whereby seemingly more sugar is consumed, with resulting increased production in the liver. One proof of this he finds in the fact that the glycemic condition is greater when parturition has been prolonged or very painful. During the puerperium the normal balance of the sugar is soon restored.

The percentage of sugar in the blood is greatly increased (on an average to 0.113 %) when the parturient is attacked by eclampsia; but the sugar is found only when the blood is drawn during a seizure or between attacks; a further fact considered to connect the phenomena with the muscular work. If the hyperglycemia resulted from disturbed hepatic functioning, then, obviously, it should continue after cessation of the attack.

Increase of sugar in the blood was not observed after abortion, except when the hemorrhage set in suddenly; during prolonged bleeding the amount was seen to diminish even. The author feels justified in excluding any connection of the suprarenal and hypophyseal glands here, because augmentation of hemic sugar generation has not been recorded for hypertrophic states of those organs.

SOME VIRTUES OF PILOCARPINE

We find an interesting study of pilocarpine, by R. J. Smith, in *Northwest Medicine* for April, page 126. In the course of his remarks, the author states that pilocarpine has a double action, through the modification of the dosage. Thus, given in small doses, this alkaloid cures ptialism; in larger doses, it has the opposite effect—produces ptialism. In small dose, it is an arterial sedative, lessening the rapidity of heart-action and reducing temperature, so that, for instance, in some cases of erysipelas, it often is to be preferred to aconitine; while, on the other hand, in large doses, it is antispasmodic, as, notably, in rigid os uteri.

Pilocarpine is useful for relieving the itching of jaundice. In this condition, the dose should be small and be given at short intervals to effect. As it increases the flow of all the secretions, it is unequaled as a diaphoretic, and, given in full doses, often will break up a cold. Also, a full hypodermic dose of 1-6 to 1-2 grain not infrequently jugulates an attack of acute rheumatism, relieving the acute pain and swelling promptly. It is a remedy of positive value in the treatment of all muscular pains, including lumbago, pleurodynia and torticollis.

Smith also has found pilocarpine valuable in eclampsia and uremia, probably because it produces free elimination. In eclampsia, he uses it in association with veratrine.

Given early, pilocarpine will cut short an attack of mumps. It also is found useful in treating the eruptive fevers, especially when the eruption is delayed. It is almost a specific in erysipelas of the sthenic type. Also, it is one of the best remedies for breaking up the chill of malaria. Asthma, pertussis, edema of the glottis, mania, and dryness of the mouth from any cause, are all successfully treated with this remedy.

The drug is also recommended in a variety of other conditions too numerous to mention in this short abstract. For one thing, the statement is repeated that it stimulates the growth of the hair when applied locally and taken internally; it also is said to darken its color. We should like to get some plausible evidence that it has this effect on hair growth. Who can supply it?

THE INJECTION-TREATMENT OF HEMORRHOIDS

In the February number of *CLINICAL MEDICINE*, we printed an abstract of an article by Sir James F. Goodhart, who, through the *London Practitioner*, had given his endorsement of the injection-method of treating hemorrhoids. In the March number of the same journal (p. 343), we find a symposium upon this subject, participated in by F. Swinford Edwards, P. Lockhart-Mummery, James Eadie, Rollin H. Barnes, Ivor Back, and Sir James F. Goodhart. All these contributors are Englishmen, with the exception of Dr. Rollin H. Barnes, who is an American, and edits *The Proctologist*, of St. Louis. Strangely enough, all the Englishmen are favorable to the injection-treatment, but the one American in this group opposes it. However, there are degrees of approval expressed by the Englishmen, some being very enthusiastically in favor of this method, others much less so.

It seems that F. Swinford Edwards, author of the first paper in the series, was the first to introduce the injection-method into Great Britain, he having contributed a paper upon the subject to *The British Medical Journal* as long ago as in the year 1888. Doctor Edwards has had an experience with some 6000 operations for piles. It appears that, under most circumstances, he favors Salmon's operation; nevertheless, he fully agrees with

Sir James Goodhart, that the eradication of hemorrhoids by means of injections might be undertaken much more frequently than it is. The only reason why he does not resort to this method more frequently is, that these patients who come to St. Mark's Hospital as a rule have been suffering for a considerable time and now desire a radical cure. It is asserted by Doctor Edwards that the cases suitable for the injection-treatment are those of reducible internal hemorrhoids, uncomplicated by external tags or piles, fissure or fistula; and more especially those in which the patient cannot afford to give up work. He also has recourse to it when general anesthesia is objected to by the patient, or contraindicated by reason of heart or lung trouble.

Edwards' procedure is as follows: After a warm boric-acid enema, the piles are extruded, the patient is placed upon a couch, in the knee-elbow position; then the piles are mopped over with a little warm lysol or other antiseptic solution. Now from 3 to 6 drops (according to the size of the tumor) of the following solution is injected into the center of each prolapsed hemorrhoid:

Carbolic acid, pure.....	grs. 24
Glycerin.....	dr. 1
Water, enough to make.....	drs. 2

Formerly, Doctor Edwards employed a 10-percent solution; that is to say, one of only half the strength of the foregoing. However, he finds the stronger solution more efficacious.

After this solution has been injected, swelling occurs at once; hence, the piles must be returned immediately. This is all, and the patient is allowed to go home, after being cautioned to return the piles, should they prolapse.

P. Lockhart-Mummery, in his article, declares that during the whole time in which he has been practicing at St. Mark's Hospital, he never saw or heard of a single instance of embolism occurring after these injections, although something like 300 operations for hemorrhoids are being performed at that institution in the course of a year. The only accident which he ever has met with in the injection-treatment occurred in the case of a patient who was the subject of hemophilia; and this man nearly died of hemorrhage from the needle puncture.

In summing up, Lockhart-Mummery says that he agrees with Sir James Goodhart, in considering the injection-treatment harmless, and he further asserts that in selected cases it gives very good results. Still, he is in agreement with Dr. Ivor Back, in considering

it inferior to operation when this can be carried out by a skilled surgeon, under suitable conditions.

James Eadie reports that during the last ten years he has made, in hospital and in private practice, about 2000 injections for hemorrhoids, and he considers it the treatment of choice for primary hemorrhoids, and the procedure to which he would prefer to submit himself should he require treatment of this nature; for, he believes that it conforms to the rule of curing *cito, tuto et jucunde*. He always advocates injection in preference to operation, except in cases where for some other purpose the patient has to be subjected to general anesthesia. In that case, Eadie contends, it is well to take advantage of the opportunity presented and surgically remove the piles at the same time.

Furthermore, Eadie believes that the percentage of cures following the injection-treatment is as high as that from any other kind of operation. Recurrences, in his experience, are the exception, while he never has witnessed any dangerous complications in connection with this treatment, and never an instance of embolism. The only mishaps observed by him are: (1) Pain, which follows if the injection is made too near the mucocutaneous junction or if the pile is allowed to remain prolapsed after injecting it. (2) Sloughing of the mucous membrane over a small area, eventuating in an ulcer or fissure. This also results, Eadie believes, from injecting too close under the surface of the mucous membrane; and for this reason he tries to introduce the fluid at least one-fourth of an inch deep, also, as near as possible to the point where the veins leave the pile.

Doctor Barnes (our countryman, as said) declares himself an uncompromising opponent of the injection-method of treatment. He does not believe it good surgery, and says that proctologists should keep up with the pace of advanced surgery. "Why not," he asks, "in this hemorrhoidal region treat a tumor as we should do in any other part of the body? Excise it, so that the skin or mucous edges come together smoothly." In concluding his paper, he says, "Do not let our experience lead us backward, rather than forward, with the trend of surgical improvement."

The papers of Back and Goodhart are, in the main, a reiteration of previous papers published in *The Practitioner*. Doctor Back presents, very succinctly, arguments for and against this method of treatment. The "pros" for the injection-treatment named are

as follows: (1) Time is saved; (2) no anesthetic is needed; (3) the treatment is painless; (4) immediate relief is given; (5) the risk of complications, in skilled hands, is nil.

The "cons" are as follows: (1) Injection is contraindicated in strangulated, sloughing or irreducible piles; (2) it is a waste of time when the piles are complicated by fistula or ulcer, since these can be cured only by operation; (3) a permanent cure will not be obtained by injection in about 15 percent of cases; or, to be correct, 40 percent of curable cases are absolutely cured by the first injection, and the remaining 60 percent have a return of symptoms within four years, three-fourths of these being permanently cured by a second injection or series of injections.

MIKULICZ'S DISEASE CURED WITH RADIOGRAPHY

It is reported by Chinton and Aubineau (*Strahlentherapie*, IV, 2; cf. *Ther. d. Gegenw.*, 1914, No. 7) that they have had good results in one case of Mikulicz's disease (symmetrical enlargement of the salivary and the lacrimal glands) by means of Roentgen-ray and radium therapy, in small dosage; this corroborating several previous writers. The source was held at a somewhat considerable distance, with thin filters interposed. After six months the patient was cured, both as to this local affection and his general wellbeing.

CHRONIC INTESTINAL STASIS

A great deal has been written, during the last two years, about intestinal stasis, the most attention being given to its operative correction; Lane recommending mineral oil, or liquid petrolatum, for the amelioration of the symptoms. This subject is again discussed at considerable length in the February number of *The Pan-American Medical and Surgical Journal* by K. Winfield Ney, who epitomizes the medical treatment as follows:

The treatment of intestinal stasis "consists in the use of liquid petrolatum in 1-2- to 2-ounce doses after meals, to correct the constipation; intestinal antiseptics, to combat subinfection; exercise, to develop the abdominal muscles; together with a well-fitting abdominal support."

With such a regimen, Doctor Ney declares, he has succeeded in securing for his patients a fair degree of comfort; thus obviating operative intervention. Of course, he believes it unreasonable to expect such treatment to

release constricting bands or adhesions, to shorten or correct a redundant colon, or to repair a deranged ileocecal valve.

The use of the mineral-oil treatment is becoming more and more popular with the medical profession, and whenever inveterate constipation refuses to yield to ordinary methods of treatment a careful trial of the oil treatment should be instituted before resorting to surgical measures. In addition, intestinal antiseptics, among which undoubtedly the sulphocarbolates are the best, are indicated in virtually all these cases.

EUPHTHALMINE AS A DIAGNOSTIC MYDRIATIC IN THE AGED

Objections more or less serious attach to the various mydriatics employed by ophthalmologists, some of which E. Schmerl, of the Charité eye-clinic at Berlin, enumerates as follows (*Woch. f. d. Ther. d. Aug.*, No. 17; cf. *Ther. Monatsh.*, p. 538):

Homatropine may continue the pupil dilated for fully forty-eight hours. Ephedrine does not always cause sufficient dilatation and is too unstable. Cocaine is liable to produce, in old people sometimes very disagreeable opacity (clouding) of the cornea. However, these objections the author does not find in euphthalmine, which he has employed in the cases of 150 persons, all more than 70 years of age.

Schmerl instills into the eye 2 drops of a 5-percent solution of the euphthalmine, occasionally repeating this once; after the expiration of from thirty to forty-five minutes there generally is maximum mydriasis, at any rate always sufficient. Not once did there occur glaucoma—neither in 500 others whose ages ranged between 30 and 40 years—and never any aggravation in glaucoma-patients. There never was clouding of the cornea, nor could increased tension be established tonometrically.

Only the high price of the drug, the author opines, may militate against its wider adoption. Chemically, this synthetic is the hydrochloride of methylvinylidiacetone-alkamine, and it forms white, soluble crystals.

ANESTHETIC OF CHOICE IN APPENDECTOMY AND IN LAPAROTOMIES

After rehearsing publications of Reiohel (1900) and Amberger (1909), besides those of Lippel, Hierlin, and others, who have theorized upon the bad results following narcosis with chloroform in abdominal operations

during the stages of acute inflammation (icterus, hebetude, coma, etc., and which these writers have ascribed either to postoperative sepsis or to degenerative processes of the vital organs), Dr. Sprengel, in an address before the German Society of Surgeons (March 26, 1913), expressed the opinion (*Muench. Med. Woch.*, 1913, No. 15) that these after-effects in reality must be considered as due to delayed chloroform toxicosis.

Having arrived at this conviction, Dr. Sprengel has not employed chloroform for anesthesia, under the conditions named, since October, 1911, and has not encountered a single case of postoperative trouble of that nature; although during the period of February to the end of September he had to record 6, and 3 of these ended fatally. Hence, he advises absolute abandonment of chloroform-narcosis in the laparotomies designated, and substitution (he inclines to think) of ether and morphine.

Crile has undoubtedly thrown more light upon operative and anesthetic dangers than any other man, and has shown how to avoid them. In a few words, the ideal plan is to prevent preoperative fear by using hyoscine and morphine, to escape operative shock through blocking off the nerve-trunks with a local anesthetic, and by using nitrous oxide and oxygen—and ether in prolonged anesthesia; these methods are most efficacious in disposing of postoperative discomforts and dangers.

ENDEMIC GOITER NOT PETROGENOUS (WATER-BORNE)

Because of its economic importance, the question of the etiology of endemic struma and cretinism is given much attention by European, particularly Swiss, pathologists. Among the various theories advanced, the one ascribing the condition to certain drinking-waters is, perhaps, the oldest and most prevalent. Of late, Bircher and Wilms, among others, investigating goiter-infested communities in central Switzerland, have claimed to have proven indubitably the petrogenous (of waters impregnated from certain geologic formations) hypothesis; although he by no means has convinced various other authoritative writers (Taussig, Weichardt, Hesse, etc.).

In support of his theory, Bircher (a Swiss) has particularly pointed out a town called Ruppenwil, where struma formerly had strongly affected the populace, but had entirely disappeared twenty-eight years ago,

after the local (alluvial) well water had been replaced by a Jura-water conducted from a distance. Many were convinced, including men connected with the Hygienic Institute of Zurich—among them Dr. Th. Dieterle, Dr. L. Hirschfeld, and Dr. R. Klinger; when, however, these three instituted systematic and searching investigations, they found Bircher's claims wanting. Their findings were published in the *Muenchener Medizinische Wochenschrift* (Aug. 19, 1913); unfortunately, we cannot reproduce the details of their elaborate work, in which pathologists, chemists, and geologists participated.

To begin with, the town of Rupperwil, we are informed, by no means is free from struma and albinism, as many as 29 percent of the inhabitants having been found afflicted. Altogether 14 communities where goiter is epidemic were visited, and 5600 persons of every age were individually examined. All possible disturbing factors were scrupulously excluded, while the localities selected had drinking-waters representing all the possible geologic strata, from triassic to alluvial. Regard was had as to place of birth, migration, communication with other infested localities, occupation, and more.

As a result of their searching investigations (to which a supplementary report has been added in the periodical named—Feb. 3, 1914), the authors definitely deny the petrogenous origin of struma; concluding, rather, that the cause must be found in specifically local conditions—the local milieu, involving general hygienic surroundings, habits of cleanliness, nature of food, soil infection, migration, contact-infection, and other factors. The strumogenic agent, it is asserted, does not attach, primarily, to any petrographic conditions, is not some colloidal substance leached out of some specific geologic formation.

Aside from the personal inquiries into the histories of the persons tested, careful and widely diversified experiments were conducted upon rats—for details of which the interested reader must be referred to the original. The general plan was, however, to use rats, of various ages, native to the locality, others brought from goiter-free regions, and those born from the latter in a goitrous community. Furthermore, these experiments were conducted in homes where goiter prevailed as well as in those where none of the family was so afflicted. And, more, some rats born in the goiter-free city of Zurich were treated with the suspected waters without their being removed. The

water fresh and boiled was given as drink, but in part also administered parenterally. All told, 480 rats were treated, at eight different stations, in the series first reported upon.

The supplementary report by Hirschfeld and Klinger is especially interesting. In the other villages, the percentages of goiter among the natives and the rats treated with the suspected drinking-waters ran nearly parallel, while in Ruppenwil the rats proved almost immune. In view of their general results, the authors claim this fact as a proof of their own position as to the milieu; for, they admit that in this place struma now is much less prevalent than formerly, but the same is true for the other localities in question. In other words, not any change in water has brought about the amelioration, but, rather, the general improvement moderately in the mode of living—cleanliness, sanitation, travel. And this is the gist of their conclusions. Exact data remain to be ascertained.

Two cases are particularly reported upon, after the information that, in Ruppenwil, of 40 rats fed on the incriminated local well water, only one developed mildly positive goitrous symptoms, aside from a few doubtful cases.

PHTHIRIASIS AND WAR

We already have published in these pages a number of articles in which reference is made to the influence of the louse in transmitting typhus fever, especially during war-time. The louse also is known to serve as a carrier for certain forms of relapsing or recurrent fever, the body-louse being more frequently responsible for these diseases than the head-louse. We know that this troublesome insect already is making itself very much at home in the trenches of the European armies, weakening the host, preventing sleep, and causing a psychic disgust which leads many officers to fear this nasty invader more than they do the enemy's bullets.

There are, as we know, three varieties of lice; the most common and best-known being the *pediculus capitis*, or head-louse, and the *pediculus vestimenti*, or body-louse. Both species are extremely difficult to rear in captivity, although in the free state they abound and multiply amazingly. However, the body-louse is said to survive longer under adverse conditions than the head-louse. Besides the foregoing, there is the so-called crab-louse, or *pediculus pubis*.

The habitat of the body-louse is that side of the underclothing next the body. When

sucking the blood of its host—a matter which it attends to at least twice a day—it is anchored to the clothing by the claws of one or more of its six legs. Free lice on the skin are rarely found, while the underside of the shirt often is alive with them.

The life-cycle of the insect, as indicated by the experiments of Warburton, is as follows:

Incubation period: eight days to five weeks.

From larva to imago: eleven days.

Nonfunctional mature condition: four days.

Adult life: male, three weeks; female, four weeks

The following rules have been prepared by Shipley (*Brit. Med. Jour.*, Sept. 19, 1914, p. 497) and others for the use of soldiers desirous of ridding themselves of the lice:

1. Search your person as often as possible for signs of the presence of lice—that is, their bites. As soon as these are found, lose no time in taking the measures noted under paragraphs 4 and 5.

2. Try not to sleep where others, especially the unclean, have slept before. Consider this in choosing a camping-ground.

3. Change your clothing as often as practicable. After clothes have been discarded for a week, the lice usually are dead of starvation. Change clothes at night, if possible, and place your clothing away from that of others. Jolting of carts in transport aids in spreading the lice, which also become disseminated by crawling about from one kit to another. Infested clothing and blankets, until dealt with, should be kept apart, so far as possible.

4. All discarded clothes, such as shirts and vests, should be collected and burned or buried or put under water. Socks are not so important as body-clothing, as lice rarely affect the forearm, the hands or the feet. Cholera-belts were, in many cases, early discarded in the South African war, owing to infestation with lice.

5. If lice are found on the person, *they may be readily destroyed by the application of either petrol (gasoline), paraffin-oil (kerosene), oil of turpentine, xylol or benzin to the head in the case of head lice.* The application may be repeated in two or more days if the infestation is heavy. Fine combs are useful in detecting and removing vermin from the head. Tobacco extract has been advocated, failing other available remedies. In the case of body lice, they can be killed as follows: Underclothes may be scalded, say once in ten days. Turn coats, waistcoats, trousers, and so on, *inside out*, examine beneath the folds of the seams and expose these places to as much heat as can be borne, before a fire, against a boiler or a jet of steam from a kettle or boiler allowed

to travel especially along the seams (the clothing will soon dry); if available, a hot flatiron may be used to kill vermin in clothing. benzin or kerosene will also kill nits and lice in clothing.

6. So far as possible, avoid scratching the irritated part.

7. Privates would benefit by instruction in these matters.

8. Apart from the physical discomfort and loss of sleep induced by the attacks of lice, it should be noted that they have been shown to be the carriers of typhus and relapsing fever from infected to healthy persons. Typhus, especially, has played havoc in the past, and has been a dread accompaniment of war.

ABORTIVE SEALING-UP TREATMENT OF GONORRHEA

Additional information on the subject of the title has been published by E. G. Ballenger and O. F. Elder, of Atlanta (Ga.), the following data being quoted in the *Zeitschrift fuer Urologie* (1914, p. 31).

Briefly, this method of cutting short a recently manifesting gonorrhea—that is, when the discharge has existed not to exceed forty-eight hours—consists in filling the urethra, by means of a urethral syringe, with a 5-percent solution of argyrol (after first urinating, of course), and then sealing up the meatus with elastic collodion; the medication being retained for six hours. This procedure is repeated once daily for five days.

In this way, the authors have treated some 650 victims, and 90 percent of cures are attributed to it.

MORE ABOUT COAGULEN AS A HEMOSTYPTIC

Coagulen Kocher-Fonio, noticed before in these pages, continues to elicit favorable reports in the German medical press. Thus, Th. v. Mutschenbacher, of the Surgical Clinic at Budapest (*Dent. Med. Woch.*, 1914, p. 1669), affirms the importance of coagulen as a physiologic, and consequently definitive, hemostyptic agent, superior to adrenalin, in that no danger of after-bleeding is involved, as from the latter. Applied to bleeding wound surfaces, in 5- or 10-percent or stronger aqueous solution, it quickly causes hemic coagulation.

So also E. Juliusburger, of the Wenzel-Hamke Hospital at Breslau (loc. cit.), speaks

highly of coagulen. This writer has tried it also for internal hemorrhages, such as hemoptysis and gastric bleeding, with prompt result—so it appeared to him. The freshly prepared, unfiltered 10-percent solution was injected into a vein.

Dr. A. Albrecht, of the Second Gynecologic Clinic at Muenchen (*Zeitbl. f. Gyn.*; cf. *Ther. Monatsh.*, 1914, p. 709), corroborates the assertion of previous writers, that coagulen acts promptly as a styptic when applied to bleeding parenchymatous surfaces, notably of the womb. On the other hand, the remedy is without effect upon arterial and more serious venous bleeding or essential menorrhagias; so, also, when injected hypodermically. Neither does it demonstrably shorten the period of coagulation. In addition, Albrecht pronounced the intravenous administration dangerous.

BLINDNESS CAUSED BY ATOXYL

R. Steinebach, of the Municipal Hospital of Dortmund, reports the case of a man (*Berl. Klin. Woch.*, 1914, p. 1116) who almost completely lost his eyesight after the ingestion of a total of only 1.2 Gram of atoxyl in the course of twenty-six days, the optic deterioration setting in a few weeks after cessation of the medication. The author points out that thus far the lowest amount (total consumed) of atoxyl reported as having caused blindness is 3.4 Grams; but here 1.5 Grams of arsacetin had been given in addition.

Inasmuch as Steinbach's patient was an alcoholic, he assumes the preexistence of a latent predisposing lesion of the nervous system, and, so, he enjoins extra caution in the administration of atoxyl in drinkers, as also when there exists cachexia, autotoxicoses, and infections of the nervous system.

TOXICOLOGY OF PHOSPHORUS

Phosphorus, in toxic doses, greatly increases the destructive metabolism of the albumin of the body, as a consequence of which we see the fatty degeneration of the tissues taking place. Recently H. Rettig, of the Medical Clinic at Heidelberg (*Arch. f. Exp. Path. u. Pharm.*, 1914, p. 345; cf. *Ther. Monatsh.*, 1914, p. 604), has demonstrated upon dogs, that the rapid disappearance of protoplasm caused by phosphorus can almost completely be prevented by the administration of large amounts of carbohy-

drates (sugar, etc.), so that the usual organic fatty degeneration does not take place.

The author deduces from this fact that a specific toxic action of phosphorus upon albumin metabolism quantitatively can play only a very small role.

TOXIC SIDE-EFFECTS OF EMBARIN

That embarin (one of the newer arsenical compounds), while ordinarily well tolerated, is not devoid of untoward action, is proven by accumulating reports among them one by G. Merzbach, of Berlin (*Muench. Med. Woch.*, 1914, p. 1231). In two of his patients, pronounced influenza-like symptoms appeared, while the temperature rose to 39° C., in one, after the third injection, in the other, after the fifth. L. Halberstaedter, of Berlin (*Ther. Monatsh.*, 1914, p. 605), saw the temperature go up to 41° C. in one patient, whose general condition also became very bad.

NEW FACTS ABOUT THE ETIOLOGY OF INFANTILE DIARRHEA

I have been much interested in some reports of the work of Metchnikoff and two of his assistants at the Pasteur Institute (Bertrand and Berthelot) as to the intestinal flora found in infantile diarrhea. Abstracts of these reports appear in *The Bulletin de L'Institut Pasteur*, September 15, 1914, pp. 739 and 740.

For four years, Metchnikoff has been presenting decisive proof of the fact that the gastroenteritis of children is an infectious disease, which can be transmitted to the chimpanzee and rabbit. Also the ingestion by animals of fecal matter from infants suffering from gastroenteritis provokes a grave intestinal infection. Furthermore, Professor Metchnikoff has succeeded in reproducing the disease in two chimpanzees and in an orang-utang, as well as in numerous rabbits. In four anthropoid apes, the disease made its appearance within four days after infection. Two of the monkeys, the chimpanzees, and the orang died as a result. Necropsy of the chimpanzee revealed the presence of lesions virtually identical with those found in infants who had succumbed to gastroenteritis. Not all the anthropoids were equally sensitive, but six out of eight animals contracted the disease. The inferior monkeys showed themselves refractory to it, and the results were negative in mice. Little rabbits at the breast, given infected stools, contracted the disease, which resembled experimental cholera in all points, the symptoms and the lesions being

identical. Bacteriological study alone will permit of an exact diagnosis. However, the mortality among the rabbits infected with infantile diarrhea was less than among those suffering from Asiatic cholera.

Professor Metchnikoff believes the proteus vulgaris to be the etiologic agent. His investigations during the last four years have confirmed this hypothesis. This organism was encountered in nearly all of the cases of infantile diarrhea studied by him; to be exact, in 204 out of 218 patients. On the other hand, in healthy nurslings, the microbe was found only twice in six infants brought up at home, and in 18 out of 33 children brought up in nurseries. The cultural experiments and the tests upon monkeys already cited seemed to prove the specific role of this organism.

The results obtained by Metchnikoff are verified by Bertrand, who, in 55 cases of infantile diarrhea studied in London, was able to find the proteus vulgaris in every one, without exception.

As to other microbes which might be considered as etiologic factors in diarrhea, the bacillus pyocyaneus was encountered but 3 times, the bacillus dysenteriformis, 15 times, and the enterococcus, 8 times. In 24 nurslings who presented no digestive symptoms, plating of the stool revealed the presence of the proteus twice only. In one of these, the child had suffered from diarrhea, with green stools, three weeks before. In the same 24 cases, the bacillus pyocyaneus was observed once, the dysenteriformis, four times, while the enterococcus was more frequent than in the pathologic stools.

Berthelot studied the symbiosis of the proteus vulgaris and bacillus aminophilus intestinalis, the latter being isolated from the feces of a patient suffering from a persistent intestinal ailment. The latter bacillus is said to be closely related to the bacillus lactis aërogenes. If this organism is cultivated in milk on which the proteus vulgaris is growing, a filtrate may be obtained that appears to be less toxic than that obtained from a pure culture of the proteus. Furthermore, if white rats are given the two microbes together, a diarrhea appears which is rich in mucus and very acid, terminating in death in ten to twenty days, or even, occasionally, in four to eight days.

Berthelot studied the toxicity of the fecal matter of the sick animals. The symptoms observed after the intravenous injection of fecal extract were similar to those obtained by injecting 1-2 milligram of imidazoethylamine, a substance which may be formed by the

action of the bacillus aminophilus on the histidin liberated by hydrolytic action from alimentary casein and in the hemoglobin of the blood. The author has experimented with vaccine-therapy, with promising results.

THE BULGARIAN BACILLUS IN TYPHOID FEVER

Knowing of the value of cultures of the Bulgarian bacillus in colitis and in the summer diarrheas, both of infants and adults, H. A. Collings (*Calif. State Jour. Med.*, Feb., p.69) some time ago began to use this agent in the treatment of typhoid fever. The results obtained have been very encouraging. He reports three cases in detail.

In the first, the patient was showing a temperature of 104° F. when first seen. Three days later, it dropped to 99 degrees, and thereafter did not rise above this point. There was no backache or tympanites after the patient came under the influence of the lactic-acid ferment.

In the second patient, a child of 9 years, the temperature was 104° F. when first seen. After an initial purge with calomel and magnesium sulphate, the Bulgarian bacillus was given. The temperature rapidly dropped to 98 and 99 degrees. The child was first seen on April 21, and on the 30th of the same month she was sitting up in bed, playing with her doll.

The third case was that of a woman 87 years old. After the initial cleanout, the Bulgarian-bacillus tablets were prescribed, and the patient got along very nicely thereafter. Headache was present throughout the disease, but there was no backache and no tympanites. She made a favorable recovery.

Of course, other indicated remedies were employed. Doctor Collings believes that through the use of the Bulgarian bacillus it is possible to avoid the dangerous tympanites, with subsequent perforation and death.

He writes that any of the commercial products of the organism are acceptable, but on the whole, he considers the liquid cultures best. His suggestions are worthy of careful consideration.

SOME REASONS FOR THERAPEUTIC NIHILISM

One good reason for the prevailing therapeutic nihilism, according to S. W. Dickinson (*Charlotte Medical Journal*, January, 1915, p. 20) is the uncertain character of many of the official drugs on sale in this country. In

support of this opinion, Doctor Dickinson quotes from an article by Martin I. Wilbert, published in *Public Health Reports*, May 8, 1914. In this article Doctor Wilbert says:

"A compilation of the analytical reports embodied in previously published bulletins shows that out of a total of more than 9000 samples of six pharmaceutical preparations reported on during the years 1907 to 1911 inclusive, more than 4000, or approximately 45 percent, were found not to be in compliance with the Pharmacopeia."

It is further shown that fully 50 percent of such commonly used medicinal substances as aromatic spirit of ammonia, spirit of camphor, tincture of opium, spirit of peppermint, and spirit of nitrous ether, were adulterated or below standard. It is also found that of 718 prescription scales examined, 195 were condemned; of 11,478 prescription weights examined, 5362 were condemned; of 3761 graduates examined, 154 were condemned.

While conditions have probably improved somewhat since the collection of these statistics, there is no doubt that many of the official preparations sold in drugstores are of inferior quality or inaccurately dispensed. Much of the trouble is undoubtedly due to the readiness with which many of these preparations deteriorate under the conditions found in the average pharmacy. That there is frequent dishonesty on the part of the druggist, we do not believe for one minute. One remedy will be found, as Doctor Dickinson himself suggests, in a wider use of alkalis and active principles.

THE BEDBUG AND ITS BITE

According to Shipley (*Brit. Med. Jour.*, Sept. 26, 1914, p. 527), the common bedbug seems to have arrived in England at about the same time as the cockroach, that is, some four hundred years ago. Apparently it came from the East and at first was confined to sea-ports and harbors.

Like the cockroach, the bedbug (*cimex lectularius*) is a frequenter of human habitations, but only of such as have reached certain stages of comfort. It is said to be very rare in the homes of savages, although it is only too common in the poorer quarters of great cities. Its presence does not necessarily indicate neglect or want of cleanliness, since it is very likely to get into trunks and luggage generally, and in this way may be conveyed even into the best-kept homes. It is particu-

larly common in ships, especially in immigrant-ships, and the writer suggests that very likely it came to the continent of America with the Mayflower; in which event it may be cited as "one of our first families."

Doctor Shipley remarks that this insect undoubtedly has considerable success in the struggle for life, as a result of its energy and determination, quoting as evidence the words of a nameless American poet, who sang:

The lightning-bug has wings of gold,
The June-bug, wings of flame,
The bedbug has no wings at all,
But it gets there all the same.

The eggs of the bedbug are pearly white, oval-shaped, and at one end have a small cap surrounded by a projecting rim, which is pushed off by the young bug when it hatches out, after an incubation period of a week or ten days. There is no caterpillar or chrysalis stage, the young being structural miniatures of their parents; however, they pass through a series of moults (five in number) before finally the perfect adult emerges.

This takes place about the eleventh or twelfth week after hatching; it is necessary, though, that the insect be fed after each moult, in default of which the following moult will be indefinitely postponed. From this it follows that in their developmental stages they must make a meal on some convenient animal (presumably the human) before they become well developed, healthy adults.

The bugs can, however, live a long time between meals. Instances have been recorded in which they have been kept alive for more than a year, one time incarcerated in a pillbox. When the pillbox was opened, the bugs appeared to be as thin as paper and almost transparent, nevertheless they had managed to produce some offspring.

Doctor Shipley declares that there really is no evidence to incriminate the bedbug as being responsible for either typhus or relapsing fever. While it is possible to transmit plague experimentally by means of them, yet, there is no epidemiological reason for supposing that this takes place to any extent in nature.

Of methods for destroying the bedbug, Shipley refers to fumigation with hydrocyanic acid gas and with sulphur fumes. The first method involves considerable danger, and should be carried out only by fully competent persons, under the most rigorous conditions. Burning brimstone for four or five hours in a room perfectly sealed is said to kill the bugs; but, to insure success, Doctor Shipley believes a longer time is needed. Two pounds of sulphur, he says, will suffice for every 1000

cubic feet of space; it being best, though, to leave the rooms closed for twenty-four hours.

Localized methods of destroying bedbugs include the liberal application of benzine, kerosene or any other volatile petroleum distillate. These must be introduced into all crevices or cracks by means of a small brush or feather, or injected with a syringe, or oiling-can. Oil of turpentine or a solution of corrosive sublimate have also proved effective, and the same is true of boiling water, when this may be used. Recently, the "flares" used by painters to burn off paint have proven of great value in ridding matchboarding or wainscoting of these and other vermine. Passed quickly along, the flame does not burn the wood, but it produces a temperature which is fatal to the bugs, the young and the eggs.

SUGGESTION FOR AN IMPROVED GRAPHIC METHOD FOR THE BLIND

Studies concerning the tactile and the muscular senses are growing in importance both from a biologic and a clinical point of view, and one among the investigators in this field is Prof. Dr. Adolf Basler, of the Physiologic Institute of Tuebingen. Comparing his work with that of, for example, Donaldson, St. Hall, Goldscheider, Leube, Gruetzner, this writer is convinced that the muscular sense as opposed to the cuticular sense of touch is more acute than has been believed.

Pasler's experiments, as described in the *Muenchener Medizinische Wochenschrift* (1913, No. 33), are decidedly interesting and cannot fail to become of practical value in several directions; what most attracts our attention, however, at this moment, is the possibility of applying his results in devising an entirely new and superior substitute for the Braille system of tangible writing.

The principle involved may be stated in a few words. A metallic plate is connected with an electric apparatus giving an interrupted current. Properly adjusted, these electric vibrations will be felt by the sensitive fingertips as a kind of tickling. If now portions of the plate are covered with a non-conducting substance, the fingers passing over them will become aware of these nonelectric points, while the spacial sense will give information of the shape of the nonconducting layers. Thus, then, using tinfoil sheets, for instance, and writing with, say, glass-ink, the blind would be placed in position to read ordinary prints, even common script writing, in conjunction with the proper apparatus. What a boon if this idea actually can be practicalized.

Miscellaneous Articles

Current Comment by a Country Doctor

LOBELIA.—Although lobelia inflata probably was an important remedy in the crude though often successful practice of the North American Indians (and from them was introduced by the colonists into domestic practice), the first conspicuous notice it obtained in medical history was from the casting of Samuel Thomson into the jailhouse in 1809, for the alleged killing of a patient by its administration. If history be even approximately true, it was hoped that exposure and suffering incident to confinement in a grossly insanitary jail would do away forever with Thomson and his revolutionary ideas. They did not even give the doctor a bit of the weed to chew as a relaxant to his feelings, although it is stated that, when the case came up for trial, the attorney for the defense ate freely of the accused herb, and that the prosecution failed to exhibit either botanical or therapeutic knowledge of this plant. If Thomson's ghost is now marching on and interested in modern galenical therapy, it is having the pleasure of seeing lobelia inflata at last coming into a well-merited recognition; especially so since the main active principle, lobeline, has entered the field.

It seems to have been quite a Thomsonian routine to use lobelia as an emetic, on the theory that every sick person needed cleaning out. It was far better than the then prevalent phlebotomy, and the "cleanout" idea was not a wrong one, although it is probable that the early botanic physicians had a full realization of the value of the herb as an equalizer of circulation and general relaxant. Perhaps we do not resort to the emetic, in these modern times, as often as we should, although, when dealing with suspicious stomach content, apomorphine given with the hypodermic needle is better and more up to date than lobelia.

After all, lobelia was a pretty good drug to have to go to jail for, and in this day of accurate therapeutics and active-principle medication it is leaving its position of apolo-

getic toleration as official in the U. S. P. and becoming recognized as an agent of importance.

While the greatest field of usefulness of lobelia or lobeline is in respiratory disorders, especially of a spasmodic tendency, and where expectorant effect is desired, it can be used to advantage in many other conditions. In the presence of a slowly dilating os, it has its indications, either alone or in combination with caulophylloid. The failure of the latter drug alone always suggests to the writer the desirability of also giving either lobeline or gelseminine. Whenever a general relaxant of prompt and certain action is required, the effect should never be overlooked, especially in spasms of various kind, whether they be those of childhood or in the awful manifestations of eclampsia. Lobeline can safely be pushed until one gets relaxation or diaphoresis, or emesis occurs.

The value of the drug as an inunction frequently is overlooked, and many a time one will be surprised by the results from a little lobeline in lanolin rubbed in thoroughly where local relaxation is required, especially in the uterine and abdominal musculature. The writer remembers one instance upon which Thomsonianism, or fence-corner therapeutics (name it what you will), and lobelia served him well. It was a case of strangulated hernia. Everything, from taxis to heat, had been tried, and it looked as if it were a case for prompt open operation. Operation in the backwoods, with the operator acting as his own anesthetist, assistant, and trained nurses! Just then the extravagant claims of an old botanic practitioner regarding the wonderful effects of Indian tobacco came to mind, and straightway a successful search for that weed was made and this used in the shape of hot fomentations; the heat being retained with oil silk. This resulted in sufficient relaxation to reduce the hernia. "Just the result of more heat," I hear some one say: Perhaps so; still, there is no greater relaxant than lobelia inflata, so, it gets the credit.

Lobeline sulphate has now largely replaced the bottle of the tincture which for many years has held its place on the writer's shelves; but, he must have lobelia. It is one of the drugs of everyday use, a drug of well-defined indications and certain results. However, it is also an emergency-drug, and sometimes a resource-drug when one is "right up against it" and wishing he had more resourcefulness of brain or someone else who did.

Malaria.—And now comes the mosquito, and with it comes the malarial plasmodium, which it honors as an intermediate host. Just why it is that, with the way pointed by modern science to get rid of one curse of mankind, the public does not avail itself of the means at its disposal and do so, is an unanswered question. It may be just apathy of the human animal in his present stage of evolutionary development; anyway, we still lack society's organized effort to stamp out completely the disease. Even screening often is neglected, while but too frequently the frogpond remains undrained until the seemingly more important economic necessity of using its bottom for agricultural or other industrial purposes impels. Still, as long as the people will have malarial fever, it will remain up to us to cure it.

The treatment of malaria fevers presents certain simple fundamental principles, yet, a multitude of different phases as the individual cases present themselves. Since Laveran's discovery, in 1880, of the organisms causing the three general types of malaria, and the additional later development in our knowledge of the etiology and natural history of the disease, we know that we deal with conditions caused by organisms that invade the red blood-corpuscles and at certain definite periods (when single infection is present) sporulate, with a resultant pathology because of mechanical disintegration of the corpuscles as well as of deprivation of the system of properly adjusted material for metabolism, and, hence, the generation of toxins resultant upon the life-process of the invading micro-organisms. The strength of the invading force, less the resistant power of the individual, manifested in points of greatest susceptibility, plus the medicinal agents introduced, is the sum of the mixed and difficult to estimate proposition.

The salts of cinchona still are the chief reliance in combating malaria, and the one used oftenest is quinine precipitated with the SO_4 radical. Like many other useful drugs, cinchona had an empirical advent, with a later demonstration of its being "rational."

Although other agents are of marked value as antiperiodics, none have as yet been demonstrated to possess the value of quinine; although it is to be hoped that, with awakened interest in the active principles of our native galenicals, this will not always be so.

The writer, while using other antiperiodic drugs, believes that quinine can be employed in practically all cases, regardless of any idiosyncrasy. By this he does not, however, mean quinine sulphate; for, he considers that to be the least therapeutically available in the multitude of symptom-complexes caused by invasion of the malarial plasmodia.

When selecting an alkaloid, we always think of the physiological action caused by the radical of the precipitating acid. Thus, either the hydrobromide, ferrocyanide or valerate are likely to be the first thought for internal medication in acute cases, unless the added arsenic-effect is desired. The arsenate more often is available in the chronic forms; while the hydrobromide never is used continuously by the writer, he objecting to continued use of the bromine radical. When selecting the ferrocyanide, we think of the sedative influence of the cyanogen radical, and remember that the ferrocyanides have not the toxicity of the usual CN combinations; also that the freeing of Fe in the formation of end-products will probably be serviceable in hemoglobin building. The valerate will be of value in many selected cases, especially where the quinine-idiosyncrasy seems strongly developed, but where we wish to push the quinine molecule beyond the point available in the ferrocyanide.

It is not the purpose here to dwell upon the other antiperiodics, although many, including salicin, are not to be forgotten. When the writer sees the case at the algid stage, he straightway breaks the chill, mostly giving glonoin; not hypodermically, though, the drug being so readily absorbed from the buccal mucosa; moreover, proper sterilizing and boiled water often are not instantly available. Give the patient a dose or two to "suck up like candy." A few whiffs of amyl nitrite also will bring the circulation to the periphery and break the chill very promptly.

As soon as the chill is broken, aconitine comes in oftener than anything else, frequently to be aided by a dose of pilocarpine. Sometimes the indicated drug in this stage will be gelseminine; probably it is not being prescribed often enough, but usually aconitine is called for. Cactus, as a rule, comes in later. The writer is not afraid of the collapse

of a toxin-stimulated heart. Of course, at the earliest possible moment liver stimulation has been started, and reasonable catharsis looked to. Calomel, bilein, and podophyllin usually are entirely efficacious in these cases.

With *secretions established*, we go to our selected form of quinine and push it, to prevent, the next chill, if possible. The battle in malaria, as in other diseases, is largely one of the leukocytes, and, hence, echinacoid and nuclein will be of aid and logically indicated in many instances. Intestinal antiseptics must be looked after always, and here the sulphocarbolates are our sheet-anchor.

If a patient is in an unscreened or improperly screened house, the writer tries to correct this condition by calling attention to the fact that a focus then exists from which the disease will surely be spread by the mosquitoes; but even at this day it is difficult to impress the importance of this fact upon some of the ignorant folk, white no less than black. The teaching of preventive medicine, whether by the individual or the state, still is slow. The writer's clientele is far from the point where they will realize that it is better to employ him to prevent sickness than to cure it. Most of them think that he should look wise, ride hard, and give a big dose or a big bottle of medicine, otherwise he is not entitled to his "immense" emoluments.

Analysis of this big-bottle proposition has proven that at times it is not possible to get the best results without yielding to this notion. "Them there little pills what doc left ain't no good." Sometimes we find that the psychological effect of the big container is necessary in the present state of public knowledge and to give in bulky solution that which would be as well administered in more compact form. It takes time to educate people up to the point where they realize that they can, to advantage, furnish their own water, letting nature provide any aiding solvent required.

The summer babies.—Eliminating trauma, including the improperly adjusted safety-pin, and the exanthemas, the main source of summer baby complaints will be found in the alvine tract. It does not take much irritation to make the baby sick, also, very little to excite the ordinary mother. That same mother is very likely to be giving carbohydrate excess in advance of the establishment of proper ptyalin secretion; or to be committing other like error. Often all the baby needs is an enema, a high one, if possible; also, some "tenths" of calomel and ipecac,

with aconitine exhibited according to Shaller's rule, and then a "nice big" dose of castor-oil. Follow this treatment and correct the diet, and often the baby soon is well.

Delayed dentition is a factor to be looked out for, and at times can be corrected by giving calcium phosphate, to aid tooth development—according to Shuessler's cell-salt theory. In certain mothers, lack of care of their own nipples may cause bacterial infection, and the unspeakable "pap" and the dirty rattle deserve investigation. The unsterilized bottle, especially the unsterilizable and criminal tube-bottle, must not be forgotten; likewise the gifts of admiring neighbors to the future president (this term used advisedly, because of the probable coming of the franchise for both sexes), whose offerings take the form of dietetic horrors, is another fruitful source of trouble.

The subject of diet is too long to enter into here, but the remark is made in passing that the complicated search for available baby-diet may be greatly helped by the use of a little pepsin or papayotin, small amounts of berberine or brucine also to be used to stimulate normal digestive secretion.

The closing observation is made that, ten to one, the baby has on too much clothing. Have the mother make the garment as close to a diaper and a sack as possible, and have her stop giving the babe real or fake alimentation every time it howls, when a nice tepid bath would make it go to sleep and take a needed nap.

A. L. NOURSE.

Sawyer ville, Ala.

GENERAL PRACTITIONERS AS REFRACTIONISTS

Your editorial in the March number of *CLINICAL MEDICINE* relative to the recent articles on "Refraction for the General Practitioner" prompts me to offer a few observations along this line for the columns of your splendid journal. For one thing, I certainly was surprised to learn that you received but one protest against the suggestion that all general practitioners should become refractionists. I do not mean protests from jealous specialists who may be afraid that such a course might result in a loss of business to themselves, but from those members of the profession who rank as "general practitioners," but who have spent the time and the money thoroughly to prepare themselves for this work.

I fully agree with you, that a physician should neglect no line of investigation promising to make him a better diagnostician. There is no doubt that many cases of severe nerve-strain, headache, stomach trouble, and those chains of conditions dependent upon nerve reflexes have been wrongly diagnosed, because the physician failed to recognize the fact that the trouble resulted from eye-strain.

I believe that every physician should keep a test card in his office and study its use. He should know enough about the abnormal conditions of the eyes to guard against overlooking a serious eye-strain; but, for a man to read a book or two or a series of magazine articles or even take a correspondence course and then pose as a capable refractionist, is but to make a fool of himself and a stumbling-block for his brothers who really have spent the time and done the necessary work to make themselves proficient in this branch.

Now, understand, please, that I speak from the standpoint of a country doctor who makes some little pretense as a refractionist. I believe I could do a fairly creditable job at refracting eyes before I began the study of medicine, as my father was one of those jeweler-opticians whom we are so prone to make light of in medical journals. Let me say, however, that his knowledge was not gleaned solely from journals and correspondence courses, but from actual study and clinical work with an expert refractionist; and I believe his work compared favorably with the best. Thus, you see my deductions are drawn from experiences and comparisons from an unprejudiced viewpoint.

We, as physicians, and more especially as specialists, are prone to look upon the optician as a joke and to take it for granted that his methods and his work are of an inferior grade.

It is high time, brothers, that we look at this matter in a different light. The men who now are able to pass the state-board examinations in optometry, as it is required here in Iowa and in a number of other states, to a large extent are men who have made a thorough study of this science, and it behooves us, as physicians, to equip ourselves as thoroughly for the work as have these men with whom we shall be compared by the public.

Now, I imagine I see some brother, exploding with righteous indignation, rise to assert that the work of a member of our honorable profession should never be compared with that of a "common" optometrist. Well, possibly not in your locality, provided you live in a physicians' Utopia where time-honored customs still

hold sway and the doctor receives due homage and is placed at the head of the funeral procession. Here, in free-thinking Iowa, however, men are judged by their works, regardless of the profession they may have the honor to represent; and the only way to retain the confidence of our patients is, to "deliver the goods."

The physician, with his knowledge of anatomy, physiology and coordination of muscles and nerves, should be far superior, as a refractionist, to the optician; and doubtless he would be if he were to put the same amount of work and study upon the subject as do our modern optometrists. The trouble is, that the large majority of our refracting physicians have not thoroughly prepared themselves in this branch, and the result is, that the general public are beginning to look upon the optician as a person as capable of doing this work as is the physician, and I blush to admit that investigation often proves their belief to be well founded. And, say, boys! when our patients' confidence once begins to slip, no matter what the cause, it is but a step for them to believe that their druggist, with his wise (?) therapeutic suggestions, such as are taught in the courses of instruction as sent out by the various cure-all-making companies, is as capable of prescribing for his ills as is the physician.

My nextdoor neighbor is a jeweler-optometrist. When he is not fixing watches, he is studying optics. When I am not driving over country roads or hurdling snowbanks, I am catching up with my laboratory examinations or reading up on various cases met with in my work, while attending to a considerable office practice between times. Now, which one of us has the best chance for advancement in the science of optics? If I had not made a special study of this branch for years and only recently left my office for several months in order to "brush up" on the subject with some of our best ophthalmologists, I certainly should make easy picking for such competition. And there are thousands of instances just like this all over the country.

Therefore, I beseech ye, brethren, if we feel inclined to take up some such work which really belongs to the "specialties," let us not do it in a halfhearted way, simply for the purpose of extracting a few more dollars from the pockets of our patients, but with an earnest desire to become as good as the best.

Let us not depend on textbooks and correspondence courses, but having gleaned all that we can from these sources, let us complete our course of study under the guidance

of some able instructor where by practical demonstrations and clinical experience we may perfect our knowledge in the chosen branch. Thus will we return with confidence in our ability, not only to do credit to ourselves, but to uphold the honor of our fraternity.

HOMER A. SMITH.

Correctionville, Ia.

[Doctor Smith's advice is excellent. The physician who wishes to be a refractionist should not be content to become a mere dabster. He should be fully qualified to do this work or he should not undertake it. I will go a step further, and say that there is no good reason why *many* general practitioners should not be doing refraction. Their general education and their medical training peculiarly adapts them to it. They have the fundamental qualifications that no jeweler or other merchant can have; and they are prepared to recognize the relation of refractive errors to general ill health, as no optometrist or optician can. The work logically belongs to the medical profession; and just as logically optometry as a profession apart from medicine can be excused only on the hypothesis that physicians are failing to do their duty.

As to how physicians should learn refraction, that is "another story." Of course it is desirable that the fitting of spectacles should be thoroughly taught in our medical schools; but it *can* be learned in other ways—even by correspondence. The essential thing is that the doctor should know it thoroughly before trying to practice it.—ED.]

HOW TO COLLECT: A DOCTOR'S EXPERIENCE

Dr. Charles H. Haase, of Elmira, New York, has written us several very interesting letters on the subject of collections and has agreed to our publishing some of his suggestions, for the good of the cause. We have selected what we hope will be most generally helpful. Doctor Haase says that he collects over 95 percent, and that less than 2 percent of his accounts go to his attorney. This is how he does it:

"Collect your bills while they are small. Always take a payment when it is offered. Render statements monthly. Render a bill soon after service is completed, before your patron has time to forget the value of the service. Accounts that are not allowed to be forgotten are paid first. Better results are obtained when bills are sent at the middle of the month. Then they do not compete with

those of the landlord, butcher, grocer, and others.

"In collecting, use various methods. The same routine will not work with all. I respond to all day calls, but at night, if I don't know the patron, I tell him that my fee is \$3.00 and that I shall have to be paid when I get there. Ninety percent say, 'Come ahead, your money is here!'

"Our statements are a distinctive color—blue. Blue and white envelopes are used; blue after the first statement. This calls attention to our statement. I keep the accounts small and weed out the deadbeats.

"Our medical journals should print more articles on the business side of medicine."

Doctor Haase sends us samples of his statements and the printed stickers that are attached to his statements. Consecutively, they are as follows:

First:

Undoubtedly this account has been overlooked. An early reply will be much appreciated.

Second:

A statement of the above has been sent you. If it is incorrect or if there is any reason why payment should not be made, kindly call or notify us at once, and the matter will be promptly adjusted.

Third:

Every consideration has been shown you in the matter of this account. If unable to settle it in full, will you not show your appreciation by making at least a partial payment?

Fourth:

Credit was given you through confidence in your honesty and integrity. Continued faith in you today leads to the belief that you will show your appreciation by making an immediate settlement.

Fifth:

No reply has been made to the several statements already sent you. Do not, through further neglect, force the use of severe, harsh, and aggressive measures to collect this little bill.

Then, if personal work fails to secure settlement, a notice like the following is sent; then, if this also is unproductive, the account may be turned over to the secretary of the association, who conducts a collection agency.

If no response is received, the delinquent's account is turned over to the county medical society, which also conducts a collection agency.

Now, that Doctor Haase has set the ball arolling, who will be next to respond with samples of forms, successful letters or unusual methods that have collected "uncollectable" accounts? If it is true that we do not devote enough space to the business side of medicine, we want to mend that oversight.

Do not hesitate to write us concerning your collection problems. We shall try to

answer you, and, if we can, will publish your question. Possibly some other "man in the field" has successfully solved the very problem

MEMBER OF THE BUSINESS MEN'S ASSOCIATION OF ELMIRA, N. Y.

_____ 190__.

M _____

Dear _____:

Your account of \$_____ is past due.

Please call and arrange for settlement before
_____ 190__.

All the merchants, trades and professions of the city are organized as The Business Men's Association of Elmira, N. Y. The names of delinquents are reported to each member of The Association and we are under contract to report your name on the above date if the account remains unpaid.

Yours respectfully,

DO IT NOW!

facing you, and will show you, too, how to overcome it. Let's see how much of this material we can have for the next issue of CLINICAL MEDICINE.

HYPODERMIC INJECTION IN SCIATICA

I wish to offer a suggestion to Dr. F. E. Hufnail, concerning his method of treating sciatica by means of hypodermic injections, as recommended in April CLINICAL MEDICINE (page 363). If only he will put a drop of collodion over the puncture after he has withdrawn the needle, the pain caused by it will be gone by the time the collodion is dry.

C. STANTON.

Glenwood City, Wis.

THERAPEUTIC PROPERTIES OF DOGWOOD

CLINICAL MEDICINE has just come to hand, and I am delighted with the rich contents

spread before us. As is universally the case, the editor is again exhorting us to the use of native drugs, and the last candidate he presents for our observation is the *cornus florida*, asking us if we know it. Sure, we do, and, along with the mention of the drug, come trooping the memories of the days of '61, when dogwood was substituted for cinchona and its alkaloid.

The great war between the states made medicines contraband, and the need of quinine, here in the South with its malaria was evident, and a substitute had to be found. Now, I do not believe in "substitution," but I do in substitutes; and "dogwood" made a pretty good one for quinine. And dogwood, or its active principle, cornin, might in many instances be used to advantage.

An old "doctor-book" is lying before me now, one that we used for prescribing in our sicknesses in those days. This is "Domestic Medicine," by Horton Howard, a work once published in three volumes, though it is here in one volume. It was printed in Philadelphia, in the memorable year of '61.

Making a virtue of necessity, we "took to the woods," as the saying is, and gathered our arms full of root, bark, and flower of the *cornus florida*, or, the beautiful dogwood. I say beautiful, for, in view of my open window is the forest with a lily-white petticoat made of the flowering undergrowth of the now blooming dogwood; and we are at present going through a cold snap that we call "dogwood winter," a cold spell that in this region invariably occurs in the blooming season of this shrub.

Doctor Howard, in the book named, describes dogwood as being tonic, astringent, antiseptic (a word I thought we of today had a copyright on), and stimulant; by some it is considered as equal to the cinchona bark or quinine; used in all fevers, particularly in remittent and intermittents. It may be given in the form of the powdered bark or may be steeped and drank as tea; or a tincture may be made of the berries. Fresh bark should not be used, as it is apt to affect the bowels.

The flowers have the same properties as the berries, and are used for fevers and colics. With sassafras, it may be used to clean foul ulcers.

My experience with this drug was satisfactory; still, as you observe, we should have it in more convenient form. Why does not some pharmaceutical house put a tincture or concentration or alkaloid on the market? The supply is enormous, and the fields are white with it unto the harvest. We are cutting and burning thousands of cords of it every year, just to get it out of our way.

M. G. PRICE

Mosheim, Tenn.

ABOUT APPENDICITIS: SHALL WE OPERATE?

I always enjoy reading your journal and get many helpful hints from it, but in one respect I feel inclined to take exception. I frequently see mention of the medical treatment of appendicitis, catarrhal and subacute, as to be preferred to surgical intervention, but I doubt whether I ever shall agree with you. I believe that the appendix practically never is diseased, if it is free from physical defect. Medical treatment and vaccines usually will relieve the symptoms for a time (and I believe the Van Cott combination of vaccine should be given preference); but, sooner or later, symptoms directly pointing to the appendix or intestinal sluggishness or to gallstone or gastric or duodenal ulcer appear, and very frequently the appendix is responsible for this.

Appendectomy is the quickest and safest route to health for the averagely constituted individual who hates to be taking medicine all the time and thinking about his insides, and the operation should be performed early enough to prevent any secondary conditions developing.

I should like to hear reports of the mild cases of appendicitis that have been cured by medical treatment and remained free for ten years from gastric, biliary or intestinal disturbance traceable to the appendix.

STEPHEN C. MASON.

Hermansville, Mich.

[Doctor, if you have received the impression that we favor medical treatment as a *substitute* for the surgical treatment of appendicitis, then we have not expressed ourselves clearly. Some of our contributors have written their objections to operative intervention, but we have tried to make it clear that a no-operation policy is always unsafe and may be exceedingly dangerous. There are instances—many of them, we be-

lieve—when a plan of “watchful waiting” is advisable; yet this does not mean that the operation is to be indefinitely postponed. We advise every patient suffering from appendicitis to have the offending organ removed, but in an interval between attacks, if possible. Such interval operations are practically free from danger. Of course, in every case which is rapidly progressive no delay whatever should be tolerated. Never, never wait for a gangrenous appendix to burst before resorting to surgery.—ED.]

EMETINE SUGGESTED FOR MALARIAL HEMATURIA

I have been very much interested in the use of emetine in tropical dysentery and in pyorrhea, and am glad to see that you, as usual, are fighting for, and winning, in the employment of the alkaloids, in place of the crude drugs, whenever they are at our command.

The use of emetine in hemorrhages seems to be proving effective, and, so, reasoning from this experience, as well as from its action in amebic infection, it has occurred to me that the hypodermic of emetine should be a specific in malarial hematuria, and also effective in the other types of malaria, such as prevail in the south.

For several years, I lived in the “bottoms” of one of your southern states—in fact, until driven out by malaria—and know something of the trials and woes of the doctor called upon to treat hematuria. Consequently, if the treatment here suggested should turn out to be as good as it looks to me, it will do much toward reducing the terrific mortality from malarial hematuria.

As we have but very little malaria and no hematuria at all here, I have no opportunity to test the emetine treatment; so, if you think it worth while, it would please me to have your friends in the South give it a try-out, and report through CLINICAL MEDICINE.

W. H. PHILP.

Toronto, Can.

[Doctor Philp's suggestion is based upon sound reasoning and good common sense. Emetine has been shown to be a potent agent for the destruction of the low forms of animal life to which the malarial protozoon belongs as well as the *entamoeba histolytica* and the *entamoeba buccalis*. It is by no means impossible that it may prove as effective as quinine in treating some of the

resistant forms of malaria. By all means, let it be given a thorough trial in malarial hematuria—also in the more severe types of the disease. In any case where the quinine is not well tolerated or fails to produce the results expected, the emetine should be used tentatively. In such cases we should be inclined to begin treatment with 1-2-grain doses of emetine hydrochloride injected twice daily.—Ed.]

EMETINE USEFUL FOR BLEEDING HEMORRHOIDS AND IN CONSTIPATION

I am learning something new about emetine every day. Here is the latest: A patient called to see me, with a ready-made diagnosis of bleeding piles. As this man refused any operative interference and simply wanted something to check the bleeding—which evidently he considered a simple thing to do—I gave him one dozen emetoid granules, 1-6 grain each, and directed him to take one before each meal.

That patient returned in three days and informed me that the bleeding had stopped after the first day; moreover, that his bowels were moving freely and easily. Can you beat it?

F. A. WIER.

Kansas City, Mo.

[Just how much emetine will do—just where it will succeed, and just where it will fail—we do not know as yet. However, it is one of the best remedies yet proposed for the treatment of hemorrhage of every description. That we do know. Emetine will not stop bleeding in every case, to be sure. One or two failures already have come to our attention; but, these failures are so few in comparison with the successes following the use of this alkaloid that we certainly feel inclined to give emetine “first choice” whenever we are called upon to treat any serious flux of blood in any location. See comment to Doctor Cook’s article, which follows.

Of course, for quick results, the drug should be given hypodermatically in 1-2-grain doses. However, where there are oozings, as in the case of hemorrhoids, the method of treatment adopted by Doctor Wier, that is, giving small, repeated doses, and emetoid being employed instead of the pure alkaloid, certainly is worthy of careful trial.

We hope that a lot of other good observant doctors who may be called upon to treat cases of “bleeding piles” will take a leaf out

of Doctor Wier’s bunch of hints and “go and do likewise.”—Ed.]

A FAILURE WITH EMETINE

Failures, I think, should be put on record as well as successes, so, I will report a complete failure of emetine in a plain case of epistaxis. The lady, 21 years of age, had repeated attacks of nosebleed, which nothing would stop except plugging the anterior nostrils. Seeing emetine so highly praised, I ordered one tube of the hypodermic tablets. I injected 1 grain hypodermically, without getting any result whatever. Then I sent for a specialist. The latter decided that the hemorrhage came from the plexus of capillaries on the septum, and he cauterized with chromic acid. A few days later, the hemorrhage occurred again, and I gave two hypodermics of emetine, 1-2 grain each, within ten minutes. I waited one hour, then, as the hemorrhage had not lessened a bit, I plugged the nose. In four hours I removed the plugging and cauterized again with chromic acid. I report this case to show that emetine will not cure or even diminish hemorrhage in all cases.

J. H. COOK.

New Carlisle, O.

[Doctor Cook is right, the failures *should* be reported; and we are glad to get this record of his experience in a case of epistaxis. The astonishing fact regarding the use of emetine in hemorrhage is that there are so few failures. As a matter of fact, this is the second only that has come to our attention, and the writer believes he has seen and read every report on this drug that has thus far appeared in the English, German, and French literature.

A hint as to the reason for the few failures is given by Nicola in the *Gazetta degli Ospedeli*. He has noted that the emetine promptly stopped the hemorrhage in all his cases of hemoptysis, except where the loss of blood was due to passive venous congestion with low blood pressure. This accords with the observations of Raeburn, already reported in these pages; the latter found that in phthisis and chronic bronchitis emetine is a powerful decongestant, *except when there is associated low blood pressure*. Even in these cases it acts nicely, he declares, if it is given in association with a cardiac tonic. “Bleeders,” we may add, probably will not respond as readily to emetine as normal individuals.

There is no remedy that does not fail occasionally. Emetine provides no exception to this rule, and we have no doubt that from time to time other men will report lack of success. In such cases, where internal medication is indicated, I hope no one will forget the value of atropine in hemorrhagic cases. See the article of Doctor Davidson, on page 571.—Ed.]

ADVENTURES OF "BILLY SPOT"—HOW EMETINE STOPPED INTERNAL HEMORRHAGE IN A DOG

"Billy Spot" is a lucky dog. He has a happy home and is owned by a beautiful young lady, a member of the family of one of my patients. Remember, I said, "a beautiful young lady." This has an important bearing on the case; for, where is the doctor, no matter how old, who is not more anxious for the recovery of a dog, either of high or low degree, if he happens to be the valued pet of a handsome girl.



Billy Spot and his mistress. Is there any doctor, old or young, who would not do his best for clients like these?

"Billy Spot" is six months old, and he has spots fore and aft. Hence, his name—spots back of his ears and on the end of his tail. He was taking an outing with his mistress one day, when a wheel of an automobile, which was running at low speed, passed over him. I was called to see his dogship immediately, when I learned the facts from his young mistress between her sobs and tears.

After a very careful examination (more careful on account of the lady rather than the

dog), I found that no bones were broken. (This being only my second canine patient, I proceeded slowly and carefully with said examination.) Billy seemed to be in great pain. He was lying on one side, with all four legs extended, and there were little twitches of the muscles, as if he was about to have a convulsion. He was so weak that collapse was threatened. Respiration was difficult, and exceedingly rapid. Upon examination with the stethoscope, I found occlusion of air-cells and moist râles; consequently, I diagnosed traumatic hemorrhage of the lungs. One of the family then ventured the information that the dog had already vomited blood.

I feared that "Spotty" would die before the medicine which I had sent for from the drugstore two blocks away would arrive. However, a second, a hurry, call soon brought the medicine, composed as follows

Prescription No. 1:

Emetine granules, gr. 1-64 each . . . No. 48
Water, enough to make ozs. 2

Prescription No. 2:

Oil of turpentine ozs. 1 1-2
Camphorated oil, enough to make . ozs. 2

I gave a hypodermic-syringeful of the emetine solution immediately, injecting it into both shoulders and hindquarters, then rubbed the liniment all over the thorax. To my great surprise, in a few minutes "Billy Spot" "sat up and took notice," seeming much easier and brighter.

Fearing that the improvement would not last, my prognosis was a possibly fatal termination by morning. However, the next day I was delighted to learn that my four-legged patient was still alive, much improved, and was breathing more slowly and with greater ease. Examination with the stethoscope indicated that the lungs were clearing and that not only had hemorrhage been arrested, but resolution and absorption were almost complete.

I repeated the hypodermic injection several times, in order to "clinch" this improvement. There occurred no more hemorrhage, and "Billy Spot" made a slow and uneventful recovery, although for three or four days there was so much soreness in the chest that he could not lie down. Although he was a dog, he had to take his sleep in cat-naps.

I believe that the emetine caused an immediate arrest of the pulmonary hemorrhage, while the absorption and clearing up of the lungs was greatly aided by the counterirritant

action of the liniment. What say the members of the "family"?

C. W. HUNT.

Brevard, N. C.

EMETINE IN HEMORRHAGE—ANOTHER REPORT

Mrs. M., age 35, suffered from menorrhagia for years, flowing excessively for ten to twelve days; then there was more or less dribbling of blood constantly until the next period. I tried emetine in this case, giving 1-2 grain of emetine hydrochloride subcutaneously upon the fourth day of the flow. The bleeding was arrested in less than three hours, although the oozing of blood (just enough to cause annoyance) continued until the next regular period. This 1-2-grain injection saved this woman from five to seven days of excessive menstrual hemorrhage and all the depressing conditions accompanying.

Examination of uterine scrapings showed this patient to be suffering from adenomatous degeneration of the lining membrane of the uterus. This condition will necessitate surgical intervention. Nevertheless, emetine caused an arrest of the symptoms, in spite of the pathological condition present.

I have used the emetine injection in this woman twice, with prompt and satisfactory results in each instance.

Another patient, Mr. W., submitted to a submucous resection of the nasal septum. Upon removal of the packing, eighteen hours after the operation, hemorrhage occurred, and the loss of blood was profuse. An injection of 1-2 grain of emetine hydrochloride stopped the bleeding within a few minutes. Half an hour later, the hemorrhage was completely arrested.

These cases are few in number, but when added to every other report, they help to swell the total to a point upon which we can safely rely. Certainly I would not be without emetine hydrochloride in my emergency satchel after these experiences.

W. H. SNYDER.

Royal Oak, Mich.

HEMOPTYSIS. URTICARIA

Hemorrhage From the Lungs.—December 2 last, I was called to see a sick man, a large-framed, robust blacksmith, who was a heavy drinker and was just sobering up from a spree. I was told that he was having a hemorrhage. I found him on a sofa with blood spattered

over his clothing, on his lips and face, and nearly two quarts of it caught in a washbowl. I immediately gave three 1-250-grain granules of atropine sulphate (by mouth), and repeated the dose in ten minutes. The hemorrhage soon was checked. I directed the atropine to be continued every hour and enjoined rest and a light diet, then left.

The following day, I administered an enema, which brought away a large amount of black clots and the dejecta had a very foul odor. The patient recovered after about ten days' treatment. I should have tried emetine, but had none. The atropine did very well.

Urticaria.—In April of this year, I had to treat urticaria in a young married woman, the wheals over her face, body, and limbs being large and the itching intolerable. I tried the usual remedies, with the cleanout and cleanup by means of saline cathartics to a watery stool. Locally, the only thing that would relieve the itching was a solution of phenol, 1-2 dram; alcohol, 8 ounces; water, 8 ounces. This gave some relief; still, she continued to suffer.

Not knowing what else to do, I prescribed emetine hydrochloride, 1-64-grain granules, one every half hour. The following day, she went about her work, the itching ceased, and the wheals disappeared. They have not reappeared to date. I do not know whether the emetine did the work or whether the trouble had run its course, and would have occurred, anyway.

I should like to have your opinion and also to hear the experience of readers.

W. C. DAVIDSON.

Sedgwick, Colo.

[Whether or not the emetine cured the urticaria we cannot say; but this favorable report should encourage others to try the drug in similar cases.—ED.]

POSTGRADUATE WORK IN CHICAGO

In the editorial department, this month, we have called attention to the advantages of American postgraduate medical schools, and have advised physicians who would ordinarily make a trip abroad for study to patronize our own institutions.

In this number of CLINICAL MEDICINE you will find the advertisement of the Illinois Postgraduate Medical School. This school presents an especially attractive program, as you will see by consulting the advertise-

ment on page 45. If you are thinking of coming to Chicago this summer for work of this kind, you will make no mistake in writing for information to Doctor Clark, secretary of this institution. In doing so, be sure to mention CLINICAL MEDICINE.

Another school which is doing good work in Chicago is the Postgraduate Medical School and Hospital, which now combines the resources of the old institution of the same name, with the old Polyclinic.

Whichever school you decide to attend, we extend a special invitation for you to come out and see us when you are in Chicago. And, by the way, whenever you are in Chicago, or have a few hours to stop off when coming through, remember that we are anxious to make your acquaintance and have many things of interest to show you.

HOW ABOUT CHLORAL IN VARIOUS DISEASES?

Generally speaking, I believe that chloral hydrate will be found an excellent substitute for the opiates now in general use. (Chloral is not barred by the Antinarcotic Law). For irritative lesions, chloral is far superior to opium. For the irritative cough of grip; for the irritative diarrhea of "summer complaint," in any condition where nervous irritation is the accompaniment of disease, chloral will bring the desired results.

Possibly you recollect my old prescription for cough, namely: Chloral hydrate, drs. 2; specific medicine gelsemium, drs. 2; syrup of wild cherry enough to make ozs. 3. Label: One-half to one teaspoonful, in water, every three hours. This is reliable.

Another prescription, one for painful lesions of the bowels, accompanied by diarrhea, is this one: Tincture of cinnamon, drs. 2; tincture of iodine, drs. 2; chloral hydrate, dr. 1; simple elixir enough to make ozs. 3. Label: One-half to one teaspoonful, in water, as needed to check the bowels. This also is reliable.

Down here, in the swamps, we give quinine in nearly all lesions.

W. P. HOWLE.

Charleston, Mo.

[Many doctors will be hunting for substitutes for the ordinary narcotics, now that the Harrison law begins to pinch. It is a good plan to do so, although when morphine (or opium) is *really* needed it should be employed, just as it always has been. Whether

chloral is a safe substitute we leave for our readers to decide. We confess that we do not greatly favor it, although it undoubtedly is a useful drug in many conditions.—Ed.]

THE INJECTION TREATMENT OF HEMORRHOIDS

Since THE AMERICAN JOURNAL OF CLINICAL MEDICINE has had the courage to bring up the treatment of hemorrhoids by means of injections, I feel constrained to add my testimony to the value of this method. I have been using it during the past thirty-five years or longer, and with practically uniformly good results. In fact, it has been the most satisfactory and successful thing I have done in my practice. It is so simple and so easily done, that the average practitioner actually seems to have a foolish prejudice against it.

The fluid I have been using all these years has this composition: phenol, 1 part; glycerin, 3 parts; distilled water, 4 parts. Mix the phenol and glycerin, add the water, and filter.

Many cases of piles can be successfully injected with an ordinary hypodermic syringe alone; nevertheless, it is much better to have a Pratt's rectal speculum (medium size) and also a 2-inch extension on your hypodermic syringe.

The patient being in position and making an effort at straining, the operator can draw the pile down into view, whereupon he injects from 10 to 20 drops of the fluid superficially into the tissues, and as high up in the tumor as he well can. The needle should be allowed to remain inserted a minute or two, so as to avoid the fluid's escaping through the puncture.

The tumor will be seen to become infiltrated and mottled in the field of the insertion almost immediately; and this is evidence that the treatment will be effectual.

The pile-tissue should be returned within the sphincter soon after the injection, and kept there. By doing this, much of the unpleasant after-effects of the treatment will be obviated.

Tumors and parts that cannot be brought out as above described must be exposed by using the speculum, and treated through that; and this necessitates the extension on the syringe.

If a large amount of pile-tissue is to be treated, not more than three or four insertions should be made at one sitting. Then eight or ten days are allowed for the resulting in-

flammation and tumefaction to subside before making another injection.

Only internal piles or those that can be replaced should be treated by this method; not external ones.

Try this method, brother, and you will be astonished as well as delighted at the result.

W. W. HOUSER.

Lincoln, Ill.

A SMALL BABY: WHO CAN MATCH IT?

I am sending you the photograph of a child 10 months old that weighs only 9 pounds. At birth, its weight was 2 pounds, clothes included; at three weeks of age, it became very much jaundiced and had a severe attack of bronchitis, the temperature running as high as 104° F.

How this baby has lived at all and thrived to the extent it has, is a mystery to me. The first four months of its life it had the expression of extreme senility, but now, as you can tell by picture, it has somewhat of a youthful and healthy appearance.

This baby was premature by two and a half or three months. The mother is 38 years old and has eight other children.



A Small Baby—Ten Months Old.

Who else has had as small an infant and still living?

Sabinal, Tex.

I. N. CAMPBELL.

[Who can match this—or beat it? Let those who want to “break the record” report

their cases and submit their evidence. We also show a picture of Doctor Campbell's beautiful home. Formerly we printed pictures of many doctors' homes. Recently we



Doctor Campbell's Home.

have gotten out of the habit of doing this. Do you want them?—Ed.]

VACATIONS AGAIN

Next month is the time to discuss vacations; so, if any reader of CLINICAL MEDICINE has any suggestions to make, or any help to offer for those of us who want to get away from the hurly-burly out into “God's own country,” now is the time to speak. Come on, everybody—let's go fishing!

FROM THE FIRING-LINE

My experience as medical director on the firing-line has made me very familiar with the battle line between the allies and Germans for nearly 100 miles. My duties require a constant movement, regulating the field hospital, the ambulance work, arranging the Red Cross work, and so on.

A dispatch called me to the general headquarters, with an intimation that I should be retained there for some time. On my arrival, I found that my duties were, to determine the questions of how to get the wounded back in the most expeditious way; also how to mobilize the ambulance service, so that it could be concentrated at any one point to meet any emergency.

For many weeks, the charges and counter-charges along the firing-line were of a desultory character, sometimes very intense, with a heavy mortality and a large number of wounded. At others, less so.

The cloudy weather made it impossible for the airmen to warn us of the concentration of

troops at different points, and the only intimation of a charge would be a heavy artillery fire at a given point. This might be many miles away from a hospital, and after the charge it would require considerable time before the wounded could be gathered up and disposed of.

At the headquarters, the entire line was mapped out on paper, showing every trench, hill, valley, and farmhouse back for a mile or two, and as much of the contour and appearance of the country on the other side of the line as could be found. Every battalion of troops was located, both in the trenches and in the rear, and any man in active service could be found, if with his regiment. The hospital in the rear was equally thoroughly mapped out. The roads, streams, and bridges were all jotted down.

My duty was, to determine where the field hospital could be made most available, and the roads to the rear, by motors, the most practical. The railroad lines further back, and the best methods of reaching them by motors and ambulances, had to be noted. Many of the field hospitals were being changed, for reasons which the officer in charge determined. Many telephones ran to all these places, and whenever a charge across the lines was reported the question was as to the proximity of the hospital and the ambulances and motors, and how to get the ambulance-corps, stretcher-bearers, and dressers to that point in sufficient numbers to meet the emergencies. The charges were made at night, and often at two or three places along the line; and frequently countercharges followed, thus increasing the wounded and dead and suddenly taxing the hospital to meet these emergencies.

In a rough board structure at the general headquarters, I noted from the 'phone where the fighting was going on, and marked it with pegs; then noted the proximity of the field hospital, and estimated whether it should be moved up nearer or remain where it was. Also, how near the ambulance corps could approach the firing-line, to gather up the wounded with safety, and the roads they would have to take to do this; and, supposing the charge was successful in driving the line back, what way could the hospital and motors retreat and escape capture. A corps of signal-officers on the ground or in the neighborhood 'phoned constantly to headquarters every change in the troops, and the medical director at that point did the same thing, and asked for instructions, stating what in his opinion would be the most practical to do.

All this entailed on the medical director at the headquarters a constant study of what would best be done under the circumstances. Thus, at one time a countercharge drove the Germans back three miles or more and a new set of trenches was established. It was absolutely certain that an attempt would be made to retake this, and, while the wounded were very numerous and the ambulance service was a good way off, it was a question where to put the receiving hospital, where the wounded could be taken with the least effort and carried to the rear. In the military department, realizing that an effort would be made here to retake the trenches, troops were hurried to this point to prevent a countercharge.

As this was a very important place strategically, the commanding general went over to the grounds to determine the best disposition of the troops. I went back to prepare for the worst and to put the hospital department in a condition to meet any possible emergency. So, arrangements were made with the greatest of care. However, for some reason the Germans did not charge on this line, although they kept up an incessant firing; but, instead, they suddenly attacked, several miles away in another direction, hurled a mass of men onto a thin line and drove it back and took a great many prisoners. This called for another adjustment, a study of the roads, the woods, and houses in the neighborhood, and how the wounded could be taken back with the least annoyance to the active forces.

Sitting in the office at the headquarters, watching the board with its pins before me, noting the disposition of the troops and the conditions behind it, one is impressed with the value of organization and the perfection of details that can be arranged miles and miles away with far more accuracy than if on the ground.

Thus, one afternoon, a certain hospital seemed to be in a dangerous position, and an order for its removal a mile or more in another direction was carried out in the course of two or three hours. The hospital authorities had no knowledge of the reasons for this, but we, looking higher up, saw the danger of their position and the possibility of its being shelled within a short time. In this we were correct. A short distance from the hospital, a concealed battery had been sending some very large shells that evidently were very destructful to the lines of the enemy, and it was certain that they would get a range of this battery and apply it before long, and

that would make the hospital a very dangerous point.

The medical side of the war is, to get the wounded back as quickly as possible. Then, if the dead can be buried without much danger, this is also important. On a line so extended and covering such a variety of hills and valleys, there are conditions which are constantly changing and requiring new adjustment; and this means business skill and quick judgment, not only in the medical department, but at headquarters. While the artillery fire is more or less incessant along the whole line, the tactics of the Germans are, to mass troops at certain points and break over the lines. Then, if they succeed in holding the ground they have taken, this is called an advance. If the allies throw masses of troops on the flank, they either have to retire or be captured, and this causes a new condition.

This is the kind of fighting that has been going on for the last two months, but probably will change when the weather gets warmer. The medical department is particularly concerned in getting the wounded off the field, as the weather is so very inclement and uncertain that serious complications from cold and exposure may follow. A man with a broken leg or a lacerated body needs help very quickly in a cold, drizzling rain, storm, snow or a biting wind, with the temperature in the neighborhood of zero. Great deeds of heroism often are performed in rescuing these poor fellows who are exposed to the constant fire of sharpshooters.

In several instances, hospital-bearers and Red Cross men, and even surgeons, have been shot in their efforts to rescue some poor fellow whose groans for help roused the sympathies of everyone who heard them. In the future, many a deed of heroism and incidents occurring in these lines will be related, that will startle readers and sound like fiction.

As I have mentioned in my previous letters, the organization and perfection of the medical department is growing steadily. The poor, weak men are being dropped and the strong, robust, self-reliant physicians take their places and become trained to their work. When the present lines are changed and the armies move on, as they certainly will, into the enemy's country, there will be perfection of detail and medical efficiency that will startle the world.

The French medical departments undoubtedly are equally well organized. The American Red Cross service has been a splendid object lesson in many ways and has

given a certain practical character to work on the front lines that did not exist before. The English service has been routine-like and founded on experiences in other wars, but the last few months have broken up the oldtime prestige and theories. An entirely different conception of the duties and methods of executing them has come into use since this war began.

Now, after a battle-charge, a surgeon and trained attendants rush over to the field, examine the wounded who are able to walk as they come back, doing the first-aid required and directing them where to reach the hospitals, and those disabled are put in motor ambulances and hurried back with the greatest speed. If the hospital is within a mile or two, the motors very soon carry back all the wounded, and are ready to take them to a receiving hospital farther inland. The wounded are usually fed, their wounds dressed, then put in the same motors and hurried back several miles to the general hospital; and here they are sorted and if possible put on the trains and sent far to the rear. At some points, 500 or 600 wounded have been taken off the field within two or three hours.

Sometimes the wounds are very severe, and, again, they are insignificant and require minimum attention. Sometimes men are carried off the field, and the surgeon is not able to make any diagnosis, not finding any wounds. At the receiving hospital, a more careful examination may fail to discover the trouble. Then they are taken farther inland to the general hospital, and here they are observed a sufficient time before the real lesions are discovered.

This is the first time in the history of wars that horseless wagons have been used to remove the wounded, and this is the first time that large bodies of troops of soldiers have been transported by great motor trucks. On one occasion, over 1000 soldiers were changed to a point ten miles away, within an hour. Automobiles and trucks were concentrated at a certain point, and, the roads being good, the change was made with startling rapidity. Motors for hospital service are used in every possible way, and their value is being recognized more and more. If the roads are good and the country is level, vast bodies of men can be shifted from place to place without the strain and fatigue of marching and can enter an engagement fresh and vigorous. Motor trucks drawing ammunition, guns, and food of all kind are in constant evidence, and light motors, carrying officers here and there, show

that the war is conducted on a scale different from any ever before waged.

The telephonic service has been equally developed. Men in the trenches can talk to those in the rear and be warned that a force is approaching them, and men in the rear know where the fighting is most severe and where the shells have done the most damage. This constant communication makes the war a business of exactness never seen before.

"BRITON."

TYPHOID FEVER: SIXTY YEARS OF EXPERIENCE

After reading the May number of *CLINICAL MEDICINE*, I have wondered how you could have got into it so much of illustrative medication, and now, having been in active practice for nearly sixty years, I feel tempted to comment briefly upon Doctor Lawrence's article on typhoid fever, published in that issue. I have a careful record of 341 cases of this disease treated here during the last thirty-one years.

Doctor Lawrence insists upon free purgation. May I report two cases, to show that this is not always essential? In my early practice, a young lady whom I was attending was almost prostrated from frequent discharges from the bowels. At last I got them under control, and then I kept the bowels quiet for sixteen days. The young woman said to her mother: "Doctor Sholl has locked up my bowels and thrown away the key."

She went on to complete recovery.

In another case, following copious hemorrhage, I kept the bowels quiet for sixteen days, and in still another for twenty-four days. At the end of the period mentioned, in both cases, the bowels moved normally and the patients went on to recovery.

In my last twenty-nine cases, I gave 1-12 of a grain of mercury bichloride every two hours. All recovered. If you add to this treatment genuine specific tincture of echinacea, 20 drops, you certainly will abbreviate the disease.

E. H. SHOLL.

Birmingham, Ala.

BELLADONNA POISONING FROM A POROUS PLASTER

Having read so many short and pointed articles from the "family," giving the experiences of many physicians, I am encouraged to report one case, which interested me

greatly. I was called early one morning, at about three o'clock, to see an elderly lady of one of the best families in the city. When I arrived at the home, I was told by a lady member of the family that the patient retired at the usual bedtime, well and hearty. About midnight, members of the family were awakened by some one walking about the house, from room to room, in an aimless manner.

Upon examination the patient appeared to be under the influence of some drug. She could not talk intelligently, and would feel around the walls of the house as if she were hunting some object. I examined the pupils and found them widely dilated; the skin was red, the mouth dry. I made inquiry about any possible mistake in taking a dose of medicine. I was assured that there was no medicine in the house that she could have taken by mistake. A young lady sleeping in the same bed told me that before the patient retired she had rubbed her back vigorously with turpentine and then applied an Allcock's belladonna plaster for a pain in the region of the kidneys. When I was told this, I made a diagnosis of belladonna poisoning. In the meantime I had given the patient a hypodermatic injection of morphine and strychnine, which was probably the best thing I could have done for my patient. I had never used morphine for belladonna poisoning before, but in this case it worked fine.

I removed the plaster, and in a few hours my patient was well again. I neglected to say that the patient exhibited every symptom of belladonna poisoning. She would not answer any questions.

I would like to hear from other members of the "family" with reference to this case; also, what the editor thinks of the case. I never heard before of one of these plasters causing belladonna poisoning. My theory in the case is that the brisk rubbing of the skin with the turpentine where the plaster was to be placed caused an acute hyperemia involving the skin and underlying structures, causing a quick action from the belladonna in the plaster, setting up belladonna poisoning. Am I right in this theory? Give me your ideas. These are mine; I want yours.

JOSEPH W. GREGORY.

Cisco, Tex.

[I believe Doctor Gregory was right in his diagnosis. The turpentine rub would undoubtedly greatly increase absorption from the area under the plaster. I do not know

how much belladonna the Allcock plaster contains, but the official belladonna plaster (*emplastrum belladonnæ*) embodies 30 percent of the extract of the drug in the adhesive mixture, and 10 Grams of this is spread upon each piece of cloth. In other words, there are about 45 grains of belladonna extract to each plaster. This, if of good quality, would contain about 1-5 grain of atropine—enough to produce decided symptoms of poisoning should any considerable portion be absorbed.

Morphine is, of course, the physiological antidote for atropine during the excitement stage, but it must be used with caution if there is depression. During this stage caffeine may be employed as a stimulant. Inhalations of chloroform or ether are indicated when convulsions occur.

Poisoning from belladonna plasters must be very rare. I do not recall another case, but possibly some of our readers have had experiences similar to that of Doctor Gregory. If so, we shall be glad to hear from them.—ED.]

ARSENO-FERRATOSE: ITS EFFICACY IN DISEASES OF THE THYROID GLAND*

In March, 1913, I reported in *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* my experience with arseno-ferratose in the treatment of two remarkable cases of Graves's disease. Since that time, I have prescribed this preparation in a case of myxedema, with much advantage, and know of its pronounced good effects in combating the symptoms of a mild form of cretinism in a young girl. Curious to relate, these cases all occurred in a village of northern New York, where I pass my summers. I know of another instance of Graves's disease affecting a lady who resides in the South during the winter, but passes her summers in the same village. In this case, Beebe's serum is being used, as I understand, and with fairly good results, although somewhat variable. In the case of myxedema, large doses of thyroid extract were given, and I believe with injurious effect, because of a mistaken diagnosis at its inception. The young girl one year ago was backward physically and her mental development was very limited. Since that time, she has improved in every way, in a notable degree.

These cases, four in number, in which arseno-ferratose has been most useful, can scarcely be mere coincidences, and I desire

very much to have other practitioners give it a thorough trial in their cases of impaired function of the thyroid gland, whether the disturbance consists in increase, lessening or change of secretion. This combination cannot be injurious, whereas thyroid extract surely is when given in inappropriately selected cases or in too large or too frequent doses, or too long continued.

Beebe's serum, while it can justly claim in its behalf much utility, not infrequently has failed to give good results, as has been credibly reported. It might be, of course, that another combination of arsenic and iron would prove equally beneficial, but that I do not know, nor am I inclined to the belief. My reason for the conviction is, that it comes from a long experience, in which I have seen many agents tried, but none with like success as that which I have ascribed to arseno-ferratose. Messrs. Merck & Co. make the following statement regarding arseno-ferratose: "By the introduction of arsenic (in organic combination) into the molecule of ferratin (an iron proteid compound originally found in pig's liver), arseno-ferratin is obtained, and this in palatable solution is known as arseno-ferratose. A teaspoonful of it contains 1 1-4 grains of iron and 1-400 grain of arsenic. The dose is from 1 to 2 teaspoonfuls."

I am inclined to believe, in view of my observations, that, whatever be the precise underlying cause of the thyroid affections referred to, they are all very favorably affected by this combination of arsenic and iron.

It is not uncommon in the practice of medicine to assert the efficacy of certain mixtures, when the same idea is not shared by others; although, really, from their known component parts we should obtain similar results, positive or negative. Nevertheless, we do not.

There have been many theories, as we know, to explain thyroid excess, thyroid deficiency or impairment of function and its consequences. The water, the soil, the air, all have been invoked, with only questionable determination as to the importance of each one by itself. When we call upon heredity to explain, it may do so in one case, but, yet, fail us in another; as, indeed, it may fail in many where we do not differentiate between sporadic disease and when the malady is endemic.

The chemical analysis of normal thyroid secretion, as we know, shows the presence of a certain amount of arsenic; and, as a matter of fact, in most thyroidic diseases the patient

*Read before The Practitioners' Society of New York, October 9, 1914.

shows some anemia. It is possible, therefore, that in all cases where this gland is morbidly affected, it requires just what arseno-ferratose supplies, to bring back its healthy activity.

For myxedema, Ewald (Osler's "System of Medicine," vol. vi, p. 462) recommends arsenic in the form of Fowler's solution, 3 drops a day, as a preventive of symptoms of thyroidism. According to H. E. Waller ("Theory and Practice of Thyroid Therapy," p. 119), arsenic seems to be a sort of guardian of the thyroid gland. Is this, he inquires, by neutralizing thyroid secretion, or does it improve the general thyroid tone, by giving general exercise? In any event, arsenic has long been a standard drug in the treatment of Graves's disease.

BEVERLEY ROBINSON.

New York City.

[I wonder how iron arsenate or arsenic iodide would act in these cases. Can anyone report experience?—ED.]

TREATMENT OF MALARIA WITHOUT QUININE

When I am called to treat an individual suffering from malarial fever, whose skin and eyes are yellow, spleen enlarged and temperature high, my first effort is, to stimulate all the eliminative organs. To do this, I give calomel in large doses, often in association with podophyllin, aloin, and bicarbonate of sodium. If the kidneys are inactive, I prescribe buchu and digitalis. Acetanilid in some form is prescribed for reducing the temperature.

During the last seventeen years, I have treated successfully thousands of cases of malaria without giving a grain of quinine; and this includes the straight intermittent and remittent fevers. My patients usually recover within from three to six days after treatment is begun. I induce profuse sweating by the use of Dover's powder. Thorough elimination of this character is the sheet-anchor of my treatment.

If I am called to a case of chronic malaria, the patient having an enlarged spleen and liver and is decidedly jaundiced, I give an alterative containing potassium iodide, nuxvomica, taraxacum, cinchona, sarsaparilla, and cascara. It is surprising how much benefit will follow the use of this combination for about four weeks. Sometimes, in severe cases, with periodical recurrences of chills and

fever, I give, in connection with this form of medication, quinine in fairly large doses.

I have been in practice for twenty years, and I used to give a good deal of quinine, often in 15-grain doses, but the patient, when he became better, would be exceedingly nervous and more or less deaf. With the eliminative treatment which I now employ, I get equally good results, without the characteristic quinine byeffects.

I treat a great deal of malarial fever in this vicinity, in fact, I have had as high as 200 patients down, in bed, with intermittent and remittent fevers, and without losing a single one; provided there were no complications.

I thoroughly believe that best results can be obtained by opening up the sewers of the body and stimulating glandular activity. It is for this reason that I take the liberty of bringing this method of treatment to the attention of the medical profession. I shall be glad to hear from others.

F. W. SPEIDEL.

Senath, Mo.

[Doctor Speidel evidently believes in the "clean out, clean up, and keep clean" methods of treatment—as we do. His method of going about it is somewhat different from ours, but the principles involved are the same. In connection with his article be sure to read the contributions of Doctor Philp and Doctor Nourse in this issue.—ED.]

NARCOTIC LEGISLATION. KEEPING RECORDS

I have read with interest your editorial on "Narcotic Legislation" in *CLINICAL MEDICINE*, in which you remark: "We thought we understood the law perfectly. Now, it seems, we do not." I reckon that is the case with about ninety-nine percent of physicians throughout the country. I am free to confess that I do not understand it.

It reminds me of an incident that occurred in my town several years ago. One of my neighbors had purchased an old colonial mansion and had employed a carpenter, who had the reputation of possessing considerable architectural talent, to make some alterations in the rooms. The carpenter, after looking over the premises, suggested several alterations in the interior of the house.

The owner did not understand some of the changes that were proposed, and the carpenter proceeded to illustrate by drawing the designs on the floor. After having covered the

floor with chalk marks and diagrams he asked the proprietor if he understood them. He replied: "Well, I don't know as I do, exactly."

The carpenter pondered a few moments and then exclaimed: "Well, I'll be d—d if I do."

That's my feeling regarding this narcotic law.

GEO. D. STANTON.

Stonington, Conn.

[It will be some time before every doctor *does* understand the law, but we must all keep on trying, for it is sure to be enforced. As we have said editorially, elsewhere, *keep the records required by the law*. To help you, we are supplying a fine Narcotic Record Book for only 25 cents. It is cloth-bound, pocket-size, ruled in red, and explains the details of the law in a carefully prepared chapter on that subject. Same book in flexible leather binding for 75 cents.—ED.]

PATIENTS THAT CANNOT TALK AND THOSE WHO CAN

Physicians sometimes ask how accurately veterinarians can diagnose diseases in the lower animals unable to express themselves in articulate language, as compared with the average diagnosis in the human subject.

While the lack of speech is a disadvantage in some ways, in another it is a decided advantage, for our animal patients never lie to us, or mislead by their own erroneous diagnoses. Many times, when studying a patient, I have wished that the animal had the power to *answer a few questions only*. However, if this meant pouring forth a stream of garrulous misinformation regarding his condition, I should say, "Oh, Lord, let him stay dumb."

In order to attain a satisfactory degree of accuracy in diagnosing diseases of animals it is essential that the veterinarian be a close observer, and thoroughly familiar with animal functions as exhibited both in health and disease. It is interesting to compare the tale told by the owner of the horse with the truth as revealed to a close, sympathetic observer by the animal itself. If the human patient paints such a delusive picture to the physician in portraying his own condition as he does when he describes the condition of his sick horse to the veterinarian, the physician who depended upon it to make a diagnosis would be sadly disappointed in getting results.

I think that the average educated veterinarian makes a more extensive physical examination of the patient than does the average human physician, for the veterinarian must depend very largely upon the information secured in this way. In making such an examination the veterinarian is not seriously hampered by objections on the part of a patient. A thorough physical examination is invaluable and should always be made in veterinary practice. I am not certain it would not eliminate some errors in diagnosing by physicians. The following incident will illustrate:

The writer was once making a professional call in the country, where he found his client in bed, suffering severely from an alleged "bladder trouble." This man said he had suffered at times for years; that frequently there was a red sediment in the urine, and various other symptoms were recounted. The man's wife was applying hot cloths at the time, so an offer of assistance was accepted. On going over the case as if the patient were a horse, to *see* and *feel* what the trouble was, an inguinal hernia was found that appeared to be the cause of the trouble. This possibility the patient denied, because "he had been ruptured ever since the war." He knew it was a bladder trouble because half a dozen doctors had told him so. However, the man was placed in a proper position, the hernia was reduced, and the suffering disappeared immediately. A truss, applied soon after, effectively prevented a return of the "bladder trouble."

While in some respects the work of the veterinarian presents disagreeable features, there are some redeeming factors. The long train of diseases due to stimulants, narcotics, and other excesses associated with "civilized man," are wanting, as are those extensive mental vagaries, disorders and desires to deceive, even the physician, that seem to be associated with man's so-called superior mentality.

N. S. MAYO, D. V. S.

Chicago, Ill.

"THE DISPENSING-DOCTOR PROBLEM AND ITS SOLUTION"

The article which follows is reprinted from the *N. A. R. D. Journal*, the official organ of the National Association of Retail Druggists. It appeared in that journal on April 22. We believe that it contains an accurate statement of the pharmacists' viewpoint, as well as a

suggestion regarding the legislative program of the N. A. R. D.

The most serious reason given by the rank and file of physicians for the dispensing of medicines by themselves is, that substitution is so generally practiced by pharmacists that physicians do not get what they order. This bad opinion of the pharmacist is systematically nursed by the salesmen of some manufacturers, and has become an effective argument, bolstered up, as it usually is, by the invention and narration of incredible stories of malfeasance on the part of the druggist.

While it must be admitted that there are a few persons holding the title of registered pharmacist who, for a small pecuniary gain, will sacrifice reputation and honor and soil the name of a noble profession, this number is a comparatively small one, and these black sheep are little respected. It is not reasonable to assume that any honorable physician would believe or conscientiously repeat the sweeping charge that almost all pharmacists substitute.

Pharmacists should take heed, either as individuals or through their associations, of the fact that the dispensing-doctor problem is calling for a solution. The demand for a reform is more pressing than appears on the surface. Formerly it was customary to berate the dispensing doctor for whatever dispensing he did, and on account of whatever competition he was responsible for, and to lay the blame solely at his door.

It has been found lately that the dispensing doctor is not nearly so much to blame as is the salesman for the manufacturer or the physicians' supply house, who often uses the most deceitful methods to sell goods, and *inferior* goods at that; and, to one who knows the frailty of the doctor and the ease with which he is tempted by plausible stories, it is little wonder that many physicians fall for the story of substitution and, in consequence, embark on the sea of dispensing.

This phase of the matter offers a means to the solution of this vexed question, and it behooves pharmacists to work along lines that will tend to overcome this degradation of being called a substitutors, when the charge is based, as it usually is, on absolute falsehood. It may be well to engage in such a manner of reform before conditions become so intolerable that relief *must* be obtained through legislation. The latter way is sure to come unless pharmacists act, but with it will come a regular storm of condemnation that bodes no good for the profession of pharmacy, although it may prohibit the dispensing of medicines by physicians who are not registered as pharmacists.

Charges of substitution should not be considered by *any* physician, unless accompanied by proof, in specified cases, which should be reported to the board of pharmacy, and, if such proof can, and will, be brought by the salesman, he will deserve thanks for ridding pharmacy of an unworthy licentiate. It may be true, where there is smoke there must be some fire; but it is equally true that every case has two sides; and seldom, one must admit, has the dispensing doctor heard any but the salesman's side.

If it is admitted that human frailty will occasionally submit to the temptation of substitution for the sake of pecuniary gain, it becomes decidedly a pertinent question to ask why it is that only the retail druggist should yield thereto, and the manufacturer be exempt. Surely, the incentive must be far greater to the manufacturer, who has hundreds

or thousands of dollars to gain, than to the retailer, who at best can gain only a few cents.

The representations that are made respecting many of the goods offered to the physician are, by no means, in accord with the price at which they are offered to him, this being very often below the lowest estimate of cost of material. According to the law of averages, and in harmony with well-defined business principles, it has become an established fact that a high price that is honest is *prima facie* evidence of high quality. It is, therefore, difficult to conceive why drugs and medicines should be exempt from this rule, or why the physician dispensing such inferior goods, having allowed himself to be persuaded that their quality is of the best, does not himself unconsciously become a substitutor.

The common charge—it is really a howl—that druggists wish to monopolize the sale and dispensing of medicines for mercenary reasons, is a charge without foundation, and no one should better recognize this fact than the doctor. A restrictive law is not wanted for the benefit of the pharmacists or in the interests of the pharmacists, but for the protection of the public against fraud and error.

It is a well-known fact that in most European countries dispensing by physicians is restricted by law to cases of emergency, for the protection of the public. By placing the responsibility for the quality of medicines on the pharmacist, a powerful safeguard is erected against substitution and mistakes, and there exists no valid reason why in this country the field of usefulness of the pharmacists should be destroyed, as it surely will be if physicians persist in dispensing their own medicines.

If the least amount of intelligent thought is given to this matter, one cannot help but see that it is to the mutual interest of both professions to eliminate from their ranks the unworthy, whether they be substitutors, nostrum venders, quacks or ignorant pretenders; and further, to cultivate higher education and to meet and help each other in a fraternal spirit, as is intended.

It does seem that it is time that druggists realize the difference between talking and preaching about a thing and the doing of it. There are individuals in both professions who recognize their interdependence and eagerly proclaim their conviction. But mere preaching counts for naught if it is not followed up by practice, and it is here that the pharmacist has been negligent. Everything is in the pharmacists' favor to win this fight, hence, no further time should be lost to bring about this most desirable reform.

Even medical journals of the better class do not side with the dispensing physician, as the following from the *Long Island Medical Journal* attests: "The proportions to which the habit of dispensing tablets and other drugs by physicians has grown in recent years are emphasized by the large number of concerns now in the field that trade almost exclusively with the physician direct. It is probable that the custom is much more extensive in the rural districts, where convenience of dispensing directly to the patient is evident, because of the scarcity of pharmacies, while hospitals and sanatoria also are large purchasers.

"The claim is made that such purchasers are, by no means, exacting in the quality of the goods they buy, being likely to make cheapness the important consideration; and, as is always the case, cheapness is known to mean inferior quality, and competition only tends to increase the evil. Could the druggist feel that the dispensing physician is

always careful to choose none but goods of approved quality, his objections to office dispensing would necessarily be a business consideration only. But, where he knows of undisputed instances in which inferior goods are purchased and dispensed, he rightly feels that such competition is unfair.

"The average practicing physician has no way of determining the quality of the tablet he buys, except the reputation of the manufacturer, and unscrupulous dealers might readily supply him with the poorest of drugs, for the sake of profit.

"It is just here that the dispensing physician is vulnerable, in claiming his right to dispense drugs if he be so disposed. The pharmacist is supposed to be trained in the preparation, identification, and compounding of medicinal substances. The physician, while trained in therapeutics, knows nothing, as a rule, of the commercial side of the pharmacist's training. If he wishes to compete with the pharmacist, he ought, at least, to be assured that his preparations, like Caesar's wife, are above suspicion.

"There is an evident trend toward legislative control in practically every calling, and the profession of medicine, if it has not already done so, must awaken to the evident faults that, unless corrected, will speedily be taken up by the people, who are the court of last resort, and set its house in order before it is too late."

We reprint this editorial, because we want our readers to understand clearly just how the druggists feel and how they intend to act, if they can. We are not particularly inclined to criticize the position which they take. From their point of view, it is, no doubt, a fair one. The purpose is, to increase their volume of business and enlarge their profits.

Needless to say, the statement of the case, as given in this article, is an *ex parte* one. The charge that dispensing doctors are using poorer drugs than are obtained in the drugstores is not supported by evidence. If they are, we want to know it. Certainly no one is more anxious to be put right on that question than the doctors themselves. We should like to see a most careful, searching test made of drugs as they are obtainable from physicians' supply houses, side by side with the same drugs as they are obtainable from the retail druggists. Until some such evidence has been submitted, the argument, that dispensing doctors are using cheap drugs, is not worth a penny. Such an investigation should be made by an absolutely independent, disinterested party. We hope that someone will undertake it. At the same time we are in agreement with the general propositions, that no man should expect to get goods of the best quality at a very low price.

As to substitution by druggists, while it is practiced altogether too often, it is by no means as common as some have charged. The majority of pharmacists are high-minded, honorable business men, undoubtedly.

The principal reasons for dispensing by doctors, the editor of the *N. A. R. D. Journal* does not even touch upon, and these are economic ones. Most physicians dispense for one of two reasons, the first being, because they know that their patients appreciate greatly the enormous saving in money when drugs are supplied by the physician.

The second reason is, that, when a doctor dispenses his own medicine, he can keep the patient under his control and thereby secure better results.

Much more might be said on the subject, but we shall not attempt to plead the case here, either for or against dispensing by the physician. As we have said so many times in these pages, every physician must decide for himself whether he will dispense his own medicines or prescribe them. We believe in leaving the decision absolutely in his hands. He can be trusted to adopt the method which, will secure the best results for his patients.

A few words we do want to add—to express our faith in the general honesty of the members of both the medical and pharmaceutical professions. The aspersions repeatedly cast upon the character and intelligence of dispensing doctors, as well as upon the pharmaceutical concerns which supply them with drugs, we cannot believe to be approved or endorsed by retail druggists generally.

DO YOU WANT CALIFORNIA JELLY?

Another physician—a regular reader of *CLINICAL MEDICINE*—who wants to offer something for exchange is Dr. L. C. Boyd, Sawtelle, California. He offers "My Sisters' Pleasant Surprise" brand of California mountain-fruit blended jellies. The Doctor declares that these jellies have created a real sensation wherever offered, by reason of their superior flavor and fine quality. We can assure you that they are excellent.

The Doctor writes that orders may be sent to him. For \$2.00, eight glasses (half a gallon) of jelly will be sent by express from Los Angeles. Such a shipment weighs about 12 pounds. As a special inducement, the Doctor will gladly tell you (when the jelly is shipped) how he treats acute febrile conditions.

Single 8-ounce glasses of this jelly will be sent by parcel post for 25 cents, plus postage. The weight of such a glass, properly packed, is two pounds.

If you are interested, order at once—certainly before July 1, specifying "berry blend." Other fruit jellies later in season.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

AT WHAT hour do you go to bed?
How long do you sleep?

Quantity and quality of sleep make or mar the individual. One may live forty days without partaking of food; one possibly may live eight days without food and water; but, seven days is the limit of existence without sleep. So much for the need of sleep for the sustention of life. Then, how should sleep be taken so as to secure from it the greatest benefit? To know the general laws that govern in this matter—to know when and how to sleep—is distinctly worth while; and this is true even if it may not be within one's power to observe the rules which it is best to follow.

Although nature has indicated unerringly when we should sleep, it is less definite regarding the length of time to be devoted to slumbers. Man is distinctly a daylight-animal—his eyes are not constructed for efficient service in darkness and there is no evidence that they have been otherwise since the race came into being. Even the cave-dwellers, the earliest men of whom we have knowledge, had eyes like ours. Therefore, night is the natural as well as the best time for recuperation by sleep.

But, why should the hours of sleep be confined to a fixed period, why is not one time as good as another for resting the mind and body? The answer is simple. For perfect sleep, that is to say, sleep that will do the most good, two conditions are required: silence and darkness, both as nearly absolute as can be. We cannot command either of these conditions in the daytime. We may secure by artificial means what may seem very nearly perfect silence and darkness, both as nearly absolute as possible, yet, they will not be real. Although we may not conscientiously recognize the fact, our nerve-centers will; and upon the condition of the nerve-centers depends the quality of sleep.

A ray of light falling upon a sleeper's eyelids stimulates activity in the nerve-centers and increases the blood supply of the brain,

which is just what should be avoided; and everyone knows how difficult it frequently is so to darken a room in the daytime that some rays will not reach one's couch. But, if our choice must lie between two evils, then, naturally, relative darkness is better than none.

As of darkness, so may it be said of silence in the daytime—it does not exist. No matter what precautions are taken, the sounds of active life, even in the country, will permeate any refuge as soon as the sun has risen. It is true that we may not notice the sounds, we may think that we do not hear them; still, we do, and they have their effect upon the activity of the nerve-centers in sleep, as do the light-rays. Everybody is familiar with the experiment of closing the ears tightly during what seems a period of absolute stillness and then withdrawing the fingers. There comes a sudden roaring the existence of which had not been conceived while the means of hearing was cut off; however, the roar of life never is absent and has its effect upon the sleeper more or less, although, naturally, far less at night than in the daytime, because then it is enormously diminished. So, it is self-deception for one to say: "Well, even if I do occasionally stay up later than usual, I get the same amount of rest, for I get up later the next day."

But darkness and silence do even more than to promote the sound and healthful quality of sleep; they actually, in a measure, induce it, if there is nothing to excite the mind. Illustrative of this and curiously interesting were some experiments made with a lad, sixteen years of age, who was blind in one eye and deaf in one ear, and who had become anesthetic over the entire body, so that the sensibility of his skin was entirely abolished. It was only necessary to close his healthy eye and to stop up his normal ear, to cause him to fall into a deep sleep within two or three minutes. He was a youth of little intelligence or imagination, and, so, receiving absolutely no impressions from without and having virtually nothing to occupy his mind, his body instantly took the

opportunity for rest. Impervious to outside influences, the boy could not find within himself ideas enough to support consciousness; but, with sight and hearing restored, he was at once again provided with the material necessary for sustaining the mind's activity and wakefulness. However, even with these senses thus suppressed, but with a normally sensitive skin, he would have remained awake. Such is the effect, in relation to sleep, of anything that may reach the cognizance of the nervous centers.

Nature's pulse has its hours for slow and for rapid beating, defined with some exactness, and all breathing creatures must respond to this prototype. Those which rank as exceptions, in any sense, must be specially provided for, from the cat-tribe to the owls. Animals confined in boxes from which all light and sounds are excluded as far as possible have been found, despite such precaution, to lose in weight far more in the daytime than during night. The very pulse of nature seemed, somehow, to be transmitted to them, arousing the tissue-destroying forces to activity during nature's working-hours.

As to when we should go to bed and how long we should stay there, no hard and fast rules can be given; but an ideal practice may be said to be, to go to bed regularly at 10 o'clock in the evening and sleep from seven to eight hours or, maybe, longer, according to age or individual requirements. Of course, a certain scope should be allowed, varying for the winter and the summer months. There are more hours of darkness in the winter, thus considerably reducing our hours of activity; while, furthermore, the altered climatic conditions make greater recuperation necessary, and, although we are not hibernating animals, we do have something of a tendency in that direction.

But, there are other reasons why the hours indicated are the best for taking sleep. The final processes of assimilation take place and the body is nourished most during sleep. This assimilation goes on much better and more rapidly before midnight than afterward. The reason for this is, that there is a more rapid circulation of the blood and this distributes the fresh nutrient pabulum and at the same time carries away the waste products.

Furthermore, oxygen is consumed by the sleeper in greater quantities before than after midnight, and it is this oxygenating element

that is necessary to the nutritive processes. Man's consumption of oxygen during these early night hours is significant and has various bearings. The heart decreases in force of action from midnight until sunrise. It is at this time when nightmares and similar disturbances occur most often, and even death takes place more frequently in the hours just before dawn. Between 12 o'clock and sunrise is, distinctly, not the best time in which to enter upon a hoped-for period of restful and beneficial sleep.

So much for the conditions pertaining to ideal sleep, sleep which, restful and dreamless, is recuperative to the limit of the occasion. Sleep we must have; the brain and much of the body must have rest, otherwise, insanity or death will ensue.

The degree in which sleep is necessary to different individuals may differ, but, the average time required for a renewal of lost material and the elimination of that which is deleterious is from seven to eight hours for those who have reached maturity. There is a good deal of myth about the stories of Napoleon and others who are said to have been sufficiently refreshed and recuperated by the fabled four or five hours of sleep out of the twenty-four. As a rule, the law of compensation in nature applies without favoritism; besides, in any event, exceptions are not to be considered in a question of this kind. It is essential to know when to sleep and how to sleep, in order to make the most of it.

Unfortunately, there frequently is a gulf between our knowledge of how to attain an end and the means for its attainment. We can not all go to bed at 10 o'clock, nor all rise early in the morning. We are subject to modern, and not always the best, conditions, so that, practically, we cannot do as we should. The best that remains for us to do is, to seek to adapt ourselves, as best we can, to circumstances; and, happily, we can do very well in this direction. Those who are compelled or, by the exigencies of our system of living, induced to turn night into day must meet the occasion sensibly. Even the social butterfly need not abandon hope and the night-watchman may live to a green old age. We have conserved our resources when we know just what to do, and ordinarily can so modify conditions that we are not so badly off, after all.

Those inclined or compelled to turn night into day must bear in mind the laws affecting

sleep and try to govern themselves accordingly. They are very simple laws. Their summary is, that sensations arising from influences from the external world must be cut off as far as possible and that there must be an abundance of fresh air.

There are, too, a number of minor rules to be borne in mind. When seeking rest, the mind should be taken from worrying subjects, and a good deal may be accomplished by practice in this direction. Too large a pillow is undesirable; it is easier to get an unimpeded breath when the head is level or nearly level with the backbone. It is better to sleep on one side than on the back, and it is not of great importance on which side. A majority of people sleep on the right side, particularly those having an irritable heart; the sleeper will do what is best for him, naturally. If one be at all hungry, light eating before retiring will do no harm.

There is no doubt that immediately subsequent to the discovery of America tobacco spread all over the world, while its employment by Sir Walter Raleigh made it peculiarly fashionable in the British Isles; still, the Romans and the Irish employed pipes for smoking long ere the Christian era, but what they smoked were dried aromatic leaves—not tobacco! The English (as a carving at Stratford upon Avon demonstrates) had done the same ere the time of Columbus.

Botanic evidence demonstrates that tobacco is an indigenous plant in China and western Asia. Tobacco has been cultivated along the Yang-tse-Kiang from time immemorial. Tobacco from the East, hence, probably encountered tobacco from the West. At first, tobacco, the same as the stronger alcoholics, was regarded as a medicinal preparation and its sale was confined to the apothecary shops. In America, it had a quasi religious function; whence its use in peace-ceremonies.

The typical effects of tobacco occur, as a rule, after long-continued use, sometimes not until after twenty years or more. While many smokers reach old age, many fail to live that long, because of their being smokers. Many symptoms are encountered in inveterate smokers. The skin is the subject of itching and reddening; the nerves of taste are blunted; patches develop in the throat; and loss of appetite, epigastric fulness, pain, vomiting, and disturbance of bowel function

are common. Menstrual disturbance occurs in women. In female cigar-makers, abortion as also pluriparity are frequent. The sexual appetite is impaired, and sometimes sterility and impotence occur. Disturbed heart action, palpitation, rapid and intermittent pulse, precordial anxiety, weakness, faintness and collapse, besides sclerosis of the coronary cardiac arteries, and left ventricular hypertrophy are of common observation. Smoking of cigars and cigarettes produces irritation of the nasal mucous membrane, diminished olfactory sensibility, chronic hyperemia of the epiglottis and larynx, sometimes even of the trachea and bronchi. Bilateral nicotine-amblyopia is common, together with central disturbance of the field of vision, a central horizontal elliptical scotoma for red and green—sometimes also in a lesser degree for blue. Often there is swelling of the auditory tubes and tympanic congestion, with paresis of the auditory nerves, and its consequences—noises in the ear, and so on.

The central nervous functions are affected by tobacco. In high schools, nonsmokers get on better than do the smokers; children from 9 to 15 years of age who smoke show less intelligence, are lazy, and have a craving for strong drink. Adults are liable to cephalic pressure, insomnia, or its converse (sleepiness), depression, apathy, aversion for work, and dizziness. There also may be ataxic symptoms, parietic weakness of sphincters, trembling, and spasms. Nicotine-psychoses rarely affect smokers, occurring more commonly in snuffers and still oftener in chewers. The prodromal stage, which lasts about three months, shows general uneasiness, restlessness, anxiety, sleeplessness, and mental depression of a religious type. After this follow precordial anxiety, and finally the psychoses proper, consisting of three stages, namely:

1. Hallucinations of all senses, suicidal impulses, depression, attacks of fright, with tendency to violent insomnia.

2. Exhilaration, slight maniacal exaltation, agreeable hallucinations; after from two to four weeks, relaxation occurs again, followed by hypomania.

3. The intervals between exaltation and depression diminish, the patient becomes irritable, but otherwise is not alive to his surroundings, perceptions and attention being lessened.

(To be continued)

Among the Books

PARSONS: "ISOLATION HOSPITALS"

Isolation Hospitals. By H. Franklin Parsons, M. D. Cambridge: The University Press. 1914. Price \$3.75.

In these days, every medical man is more or less of a health-officer and interested in the establishment and management of hospitals for infectious diseases; and this book has been written with the special object of furnishing practical help and suggestions to those who are thus interested. The experience gained during a long, official career, as first assistant medical officer of the Local Government Board of London, enables the author to present some useful information and hints not otherwise readily obtainable. On subjects of controversy, such as the utility of hospital isolation in scarlet-fever, the aerial conveyance of infection from smallpox hospitals, and allied phases, the author has given a fair summary of the arguments on both sides, leaving the reader to decide for himself; although he frankly states that, in his opinion, the truth will be found to lie somewhere between the two extreme views or, perhaps, in a different direction altogether.

The book has a peculiar human interest, in the fact that the author died while the proofs were being passed through the press. The editors of the series were fortunate in having secured the services of Dr. R. Bruce Low, also a former member of the Local Government Board, who kindly undertook the correction and completion of the work, which thus may be regarded as Doctor Parsons' last legacy to the profession, with Doctor Low as the able and sympathetic administrator. And it is a worthy legacy, finely crowning the long and useful career of so eminent a man.

BARCLAY: "THE ALIMENTARY TRACT"

The Alimentary Tract: A Radiographic Study. By Alfred E. Barclay, M. A., M. D., B. C. (Cantab.), M. R. C. S., L. R. C. P. New York: The Macmillan Company. 1915. Price \$4.00.

This book has a peculiar human interest, in that it promises to be the last of its kind

that will come out of England for some little time to come. In his preface, the author pathetically says: "War, wholesale slaughter, collapse of credit and God knows what will follow in the wake, are upon us in Europe. Culture, art and learning are overshadowed by a menace such as destroyed the ancient civilizations. In the shadow of this calamity I thought it best to send out this work as it stands—several chapters I had intended to rewrite and enlarge."

The book bears the mark of having been turned out in such chaotic conditions. It is unfinished and rough at the ends. Nevertheless, the substance of the book is excellent. As the author says, there is a real need for a book on the radioscopic examination of the alimentary tract. The work done in this branch of diagnosis in the past few years has been simply wonderful, and it is all embodied in this little book. It represents an earnest attempt to bring the author's own departmental knowledge to the assistance of the clinician.

DAVIS: "OBSTETRICS"

Manual of Obstetrics. By Edward P. Davis, A. M., M. D. Professor of Obstetrics in Jefferson Medical College, Philadelphia. With 171 illustrations. Philadelphia and London: The W. B. Saunders Company. 1914. Price \$2.25.

What a wonderful expansion the subject of obstetrics has undergone in, let us say, the last twenty-five years! From the mere clinical care of the lying-in woman, it has broadened into a science of reproduction, of which the practice of midwifery is a mere incident. No wonder the author of this manual admonishes us that "one who wishes to study the newest gains in obstetrical science must consult the best journals throughout the world."

Of course, Doctor Davis does not attempt to cover the subject with any exhaustiveness or even comprehensiveness in these few hundred duodecimo pages. He aims only to give a concise account of modern obstetrics. Still, the small volume which he offers us is, after all, an epitome of this latter-day, wide-

embracing science of reproduction, quite different from the older manuals of midwifery.

We have one serious criticism to make of the book. We think it is a very grave defect that the author has omitted all mention—or practically so—of the subject of anesthesia in labor, which is demanding such urgent consideration from the obstetricians of the present time. We refer, not to the “whiff of ether” which the author briefly recommends “at the summit of a pain,” but to the genuine, prolonged anesthesia which spares the parturient woman the agony of the entire second stage. If Doctor Davis does not approve of this procedure, he should at least have said so, and given his reasons therefor, so that his readers, who presumably are interested in the matter, might judge for themselves the validity of his objections. In view of the importance of this phase of obstetrics and the urgency with which it is forcing itself upon the medical profession, the physician has a right to expect that the writer of a modern book on obstetrics shall express himself one way or the other, giving reasons for the faith (or lack of faith) that is in him. To ignore the question is inexcusable.

FYFE: “SPECIFIC DIAGNOSIS AND MEDICATION”

Specific Diagnosis and Specific Medication. By John William Fyfe, M. D.: Embodying the Work on the Same Subject by the Late John M. Scudder, M. D. Cincinnati: John K. Scudder, publisher. 1914. Price \$5.00.

To the physician who practices “specific medication,” diagnosis is rather a different matter from that which it is to the ordinary medical man. What is termed specific medication is governed entirely by the symptoms, or, as they are termed, the “disease-expressions.”

So, while the doctor of the specific-medication school is advised to make a diagnosis in accordance with the accepted nosology of the day, “for the benefit of medical science and also for his own personal benefit”—because, as he is warned, “a single mistake in this form of diagnosis may prove extremely detrimental to his reputation”—yet, he is explicitly told that such diagnosis should have but little influence in the treatment of the case. He must, in fact, go to work and make quite another sort of diagnosis, consisting of a process of taking the symptoms, and properly classifying and collating them with a view to the selection of the indicated remedy. The

diagnosis, in fact, as we are plainly told in the introduction, means remedies.

It is impossible for the reviewer either to discuss or to criticize such a position, because it is quite outside his philosophy. One can only say, cryptographically, that for those who like this sort of thing this is the sort of thing they like.

COAKLEY: “NOSE AND THROAT”

A Manual of Diseases of the Nose and Throat. By Cornelius G. Coakley, A. M., M. D. Fifth edition, revised and enlarged. New York and Philadelphia: Lea & Febiger. 1914. Price \$2.75.

Each article in this new edition has been carefully revised and such changes and additions made in the discussion of the diagnosis and treatment as the author has found desirable as the result of his own experience. The purpose of the work, as avowed by the author, is, to provide a compact manual answering the needs both of the student and the practitioner. Special attention, therefore, has been paid to the more practical aspects of the subject; namely, to diagnosis, examination, and treatment.

The text is arranged with a view to giving the reader prime assistance in carrying out these procedures. The author has selected from the numerous medicinal and operative measures those which, in his experience and judgment, are the best, and has given full details of these, for the benefit of those who have not had the advantage of personal clinical instruction. A special chapter on therapeutics also adds considerably to the practical value of the book. Individual references to authorities wisely have been omitted, with a view to keeping down the bulk of the volume.

JACOBY: “CHILD TRAINING”

Child Training as an Exact Science. By George W. Jacoby, M. D. With illustrations. New York and London: The Funk and Wagnalls Company. 1914. Price \$1.50.

The author very pertinently asserts in his preface that the basis of all pedagogic training must be the general assumption that only in a healthy body can there exist a healthy mind, that is to say, one capable of harmonious development. Protection of the body against disease-bearing influences that react upon the psychic functions or the removal of an

existing disorder does not belong to the domain of pedagogic science, but is the part of medicine or hygiene.

It is here that the two sciences have a practical contact. We cannot expect the pedagog to possess sufficient knowledge of physiology, pathology, and hygiene to determine unaided when and where prophylactic or therapeutic measures are required. Still less can we expect him to carry out such measures unaided. On the other hand, the pedagog should have sufficient understanding of these subjects and the physician understand enough of pedagogic problems to enable the two to cooperate in the care of the child.

This book represents a systematic effort to correlate the two sides of the child-problem. It is, in fact, a textbook of this co-operative aspect of the subject of child-training. We recommend it cordially to the earnest study of physicians and of teachers who are interested in this most important topic.

SHEFFIELD: "THE BACKWARD BABY"

The Backward Baby: A Treatise on Idiocy and the Allied Mental Deficiencies in Infancy and Early Childhood. By Herman B. Sheffield, M. D. New York: The Reiman Company. 1914. Price \$1.00.

The contents of this little book constituted an essay for which in 1914 the author was awarded the Alvarenga prize of the College of Physicians of Philadelphia. It presents a practical survey of the pathology, diagnosis, and treatment of mental deficiencies as they occur in children under five years of age. The author states that he was impressed with the fact that monographs and textbooks on the subject were, for the most part, confined to the study of feeble-mindedness in children of school-age and in adults. It seemed to him that with a more thorough knowledge of idiocy and cognate affections in infants, the physician would be in better position to ameliorate, perhaps to cure, these conditions before the underlying lesions should have permanently destroyed the brain and its functions.

Hence, this present attempt to set forth the problems involved from the standpoint of the infant and young child. It is a worthy aim, embodied in a very worthy little book, well deserving of imitation in other quarters. Indeed, we may hope that at some not far distant day the author himself will supplement this modest effort with a larger and more

pretentious treatise upon the subject. There is plenty of room for such a work.

NAGEL: "NERVOUS DISEASES"

Nervous and Mental Diseases: A Manual for Students and Practitioners. With an Appendix on Insomnia. By Joseph Darwin Nagel, M. D. Second edition, thoroughly revised. Philadelphia and New York: Lea & Febiger. 1915. Price \$1.00.

The author of this little manual disclaims any intention of usurping the place occupied by larger and more elaborate textbooks and states that his prime object was, to give the student the essence of the subject in a form that would permit of quick review and enable him to become familiar with those facts necessary to a successful pursuit of the more advanced courses. He has built upon the three-cornered foundation of brevity, clearness, and comprehensiveness.

In this second edition, changes and additions have been made that bring the book into line with the latest advances on the subject; also a selected list of state-board examination questions have been inserted immediately preceding the index. This latter feature demonstrates the real design of the book, namely, to furnish a review of nervous and mental diseases for examination purposes. Considered in this modest light, the book is really a very admirable epitome of the subject and may be highly commended to those whose minds require (as the minds of most of us do at times) a refresher, whether for the purpose of passing an examination or for other ends.

SCHOTT: "BALNEOGYMNASTICS IN HEART DISEASE"

The Balneogymnastic Treatment of Chronic Diseases of the Heart. By Theodor Schott, M. D. With 87 illustrations, including 41 gymnastic poses. Philadelphia: P. Blakiston's Son & Co. 1915. Price \$2.50.

It is, as Doctor Anders says in his introduction to this book, confessedly difficult to carry out the numerous details of this treatment, and it can be employed with the fullest measure of success only by a specialist of widest experience located, as is Professor Schott, at Bad Nauheim. At that peaceful resort the patient also enjoys the advantages of being removed from the cares and responsibilities growing out of practical affairs at home.

However, Professor Schott has described in detail the imitation baths for sufferers who are not in a position to avail themselves of the methods at the Spa, and recommends that one should employ preferably for this purpose the Nauheim springs salts. The directions for instituting the home treatment are full and accurate and will be much appreciated by the profession as a whole. Especially valuable are the chapters dealing with appropriate gymnastic exercises in selected cases.

POPE: "MEDICAL DICTIONARY FOR NURSES"

A Medical Dictionary for Nurses. By Amy E. Pope. New York and London: G. P. Putnam's Sons. 1914. Price \$1.00.

In her very brief preface, the author says: "My thanks are due to the publishers who suggested the compiling of this book." By the same token and to the same extent, the publishers are deserving of the thanks of the entire nursing profession. And, while we are distributing thanks, do not let us forget the author herself, who has done so much for her own fraternity. The fact is, this is one of those books about which one wonders why it was not produced long ago.

The difference between this book and a dictionary for physicians becomes evident as soon as one looks into it; and this difference immediately justifies its existence. It is something more than a mere dictionary. It does more than define; it explains, simply, clearly, briefly, the things the terms for which it embodies, and does it from the standpoint of the nurse. And to those who are familiar with the rest of Miss Pope's works it is not necessary to say that this is all done in excellent style and with rare judgment. We will go even so far as to say that they who write dictionaries for physicians may well learn from the way in which Miss Pope writes a dictionary for nurses. If this be treason, be it so.

OVERALL: "EVOLUTIONARY MEDICINE"

Evolutionary Practice of Medicine and Surgery. Causes and Diagnoses of Chronic Diseases. By George Whitfield Overall, M. D. Chicago: The Rowe Publishing Company. 1914.

The author feels that he has succeeded in ascertaining the causes, diagnoses, and cure of from eighty to ninety-five percent of all those chronic diseases which hitherto have

been considered incurable, and that he has set back the hand of the surgical dial almost to the vanishing-point. It is now more than six years since the last edition of Overall's work was issued, and since that time many noteworthy improvements and discoveries have been made. Of special interest are the recent discoveries of various causes of disease, knowledge of great assistance in diagnosis, not only of the troubles traceable to the kidneys and other genitourinary organs, but also of obscure heart, nerve, and circulatory complications, characterized by excessive alkalinity or acidity of the urine, and which give rise to many other organic diseases.

The principal part of the book, as doubtless everyone knows, is directed toward the treatment of acute and chronic prostatitis, in which the author has worked out a system of his own that is original and practical, and gives results that no other method can give. He does not wish to be understood as condemning the use of the knife in every instance, but holds it to be the physician's duty to exhaust every other means of relief before resorting to surgery.

OTT: "FEVER"

Fever: Its Thermotaxis and Metabolism. By Isaac Ott, A. M., M. D. New York: Paul B. Hoeber. 1914. Price \$1.50.

Doctor Ott is well known to the medical profession, both as an author and an authority in the field of physiology. His textbook has long been a standard in the literature of the subject, especially in the teaching-literature. By producing this little book, which represents a series of lectures delivered to his sophomore classes, he has filled in a gap in his own more elaborate work—a gap, indeed, which yawns in the midst of practically every treatise on physiology.

The method is inductive, from beginning to end. The author cites and explains the numerous and varied experiments that have been performed at different times and in different places, in attempts to investigate the problem of fever, and from them he draws his conclusions; and these conclusions are summed up in the view that fever consists of two main factors, namely, thermogenic and toxogenic.

It is not feasible to analyze or even to review these lectures adequately; they must be read—and read thoughtfully—in order to be understood and appreciated. Let no one imagine that their interest is purely academic; they have a decidedly practical value.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Answers to Queries

ANSWER TO QUERY 6093.—“Tinea Versicolor.” In the May number of *CLINICAL MEDICINE*, I notice a query by J. D. S., concerning the treatment of tinea versicolor. It may interest him to learn that Tilbury Fox, in his work on skin diseases, gives what I consider an infallible remedy for this trouble; this treatment having been employed by me in many cases, even those of many years’ duration, and without ever a single failure. I quote from the book in question:

“I have one mode, and it is always successful. I, first of all, have the part washed with yellow soap, then sponge with a little weak vinegar and water, and apply freely a lotion composed of from 4 to 6 Grams of hyposulphite of soda and 6 ounces of water. A hyposulphite bath once or twice, if the cure be obstinate, will aid somewhat, but I never require much else than this for any case. The secret of the cure consists in getting off, by the use of the watery lotion, the greasy matter of the skin with soap, and in continuing the use of the parasiticide for some time after all appearance of the disease has vanished.”

If J. D. S. will make fair use of this treatment and fail, I then believe he should correct his diagnosis.

J. W. GRISARD.

Winchester, Tenn.

ANSWER TO QUERY 6098.—“Mistletoe.” Reading the article in the May number of *CLINICAL MEDICINE* on “Mistletoe” carries me back to the days before the war. I distinctly remember several cases of “fits,” as they were then called, being cured by tea made from this plant, which was gathered from the apple trees in the winter. It stays green all the year round.

W. S. CLINE.

Woodstock, Va.

ANSWER TO QUERIES 6087 AND 6093.—“Varicocele” and “Ringworm.” If J. R. P., California, will try bathing with cold water several times a day, in connection with the use of a proper suspensory, he will find that only in the worst cases will an operation be required for the treatment of varicocele.

Also, if J. D. S., Pennsylvania, will refer to page 340 of the April, 1914, number of *CLINICAL MEDICINE*, he will find, under the heading, “Novel Treatment for Ringworm,” a description of one of the best methods of managing this disease. The patient can often be cured permanently by a single application. Never have I found more than two such applications necessary to complete the cure.

G. L. J.

—, Tennessee.

Queries

QUERY 6100.—“Stomatitis, and the Wassermann Test.” R. H. L., Texas, asks for assistance in the following case. “The patient, a woman of 25 years, has enjoyed good health, all her life, except for rheumatic pains in various parts of the body, which started some ten years ago. Also, there is a tendency to indigestion. Her father died, at the age

of 43 years, from pneumonia, but always had been considered a healthy man. Her mother is living and in good health; so are her brothers and sisters. I can discover no evidence of syphilis, although no specific test has been made.

Ever since this patient was 12 years old, she has been troubled with small ulcers in

her mouth, on the gums and cheeks. These ulcers persist for a few days or weeks, then heal up; but others follow in different spots of the mouth. They first appear as small, round, highly inflamed nodules, which in a few hours break down and turn a whitish color, remaining thus (often enlarging to the size of a half pea) until final healing. The lesions seem to be more plentiful just before the catamenia, and for the last six months the vagina is affected as badly (or worse) as the mouth. The eruption is of the same nature, exactly.

"This woman has been under my treatment for about three months, but there is no improvement, notwithstanding that it would be easier for me to tell what has not been done, than to describe the various therapeutic procedures tried. The patient, moreover, has 'been the rounds,' has tried all the doctors within reach, yet, nothing has been accomplished by any. Of course, she is very much discouraged. This woman has been married for eight years, but never has been pregnant. Her husband is a stout, healthy man. He was married before and has one son, about grown up, who is perfectly healthy."

It is not impossible that this is a somewhat atypical ulcerative stomatitis; however, the fact that the vaginal mucosa also is affected looks decidedly peculiar, especially when we consider that the eruptions in the mouth began at about the starting of sexual life, with the vaginal lesions appearing after her marriage. Altogether, one is inclined to suspect syphilitic infection. The lesions would seem to be almost characteristic. The appearance, ten years ago, of "rheumatism" in various parts of the body may, of course, indicate marked and persistent autotoxemia, but also the presence of the Neisser bacillus. But, the failure of all ordinary treatments is decidedly suggestive.

Under the circumstances, we suggest that you have a Wassermann test made and send a specimen of the discharge from the ulcers (buccal and cervical), together with a 4-ounce specimen of urine (taken from the 24-hour output, stating total quantity voided) to a pathologist, for examination.

QUERY 6101.—"Treatment of Morphinism." H. S., Missouri, and others, request an outline of the Lambert-Towns treatment, and ask whether it can be successfully employed in private practice, with the patient remaining under care at home.

The most recent description of the Lambert-Towns method of curing morphinism appeared in *The Journal of the American Medical Association* for March 20, from which we copy the salient points. The main feature of this cure consists in a vigorous cleaning out of the intestinal tract, by means of compound cathartic pills and blue mass. The other essential is, the persistent administration of the following belladonna mixture:

Tincturæ belladonnæ (15 percent) . . .	dr. 1
Fluidextracti xanthoxyli	dr. 1
Fluidextracti hyoscyami	dr. 1

After three or four abundant evacuations of the bowel, following the administration of 5 or 6 compound cathartic pills and 5 grains of blue mass, the patient is given, by mouth or hypodermically, in three divided doses and at half-hour intervals, from 2-3 to 3-4 of the total 24-hour dose of morphine (or other narcotic drug) which he is in the habit of taking. By means of a medicine-dropper, the patient is given 6 drops of the foregoing belladonna-mixture with each fractional dose of the morphine, as just explained; being repeated every hour for six hours. At the end of the period, the dose of the belladonna-mixture is increased by 2 drops, and continued at hourly intervals for another six hours. Then it is again increased by 2 drops. This course is continued, at the same intervals, increasing the dose by 2 drops after each six hours until each single dose of the mixture reaches 16 drops. Then the doses are continued at this amount, unless the patient begins to show symptoms of belladonna-poisoning; in which case it is reduced by one-half. As soon as the toxic symptoms subside, the doses are again increasingly run up to the maximum or the limit of toleration.

Ten hours after the initial dose of morphine in the course, 5 compound cathartic pills and 5 grains of blue mass again are given. In fact, the treatment seems to depend upon forced purgation and the induction of a mild belladonna-delirium.

Answering the second query, the Lambert-Towns method undoubtedly is effective, while also it could be carried out at the patient's home, provided a thoroughly reliable attendant is constantly in charge; the physician himself also maintaining a close supervision.

A different, equally successful but decidedly less distressing treatment has recently been presented to the readers of *CLINICAL MEDICINE*. As was stated in that article (Waugh, April, p. 336), the individual who really is in earnest can, by this course, be cured, positively

and without undue suffering, in from ten to twenty days. Of course, any one whose system is suddenly deprived of such a potent drug as morphine must, for at least thirty days after its withdrawal, be looked upon as a convalescent, and treated accordingly. Half the failures are attributable to the withdrawing of tonics and allowing the convalescent to overtax himself within a few days after relinquishing his drug.

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QUERY 6102.—“Hemorrhoids and H-M-C Anesthesia.” E., Mississippi, is his own patient, suffering greatly from hemorrhoids, mostly external, but also internal ones. He is in good health and able to help himself, but cannot consent to general anesthesia, for an operation. He wishes to know if the operation could be performed under H-M-C and local anesthesia, or, whether it would be preferable to inject carbolic acid and glycerin at the base of the tumor.

Our correspondent informs us that he has used H-M-C several times when extracting badly decayed roots of teeth, with satisfactory results. He has also seen it used successfully where abscesses were opened and broken arms set, when the swelling and the pain both were great; the patient, in some cases, sleeping while the work was going on. Hence, he thinks H-M-C should prove “the thing” in removing his piles.

External (thrombotic) hemorrhoids can be incised and the clot evacuated under local anesthesia with chloride of ethyl. Internal hemorrhoids, however (so-called “marginal tumors”), may be injected painlessly by a competent operator, and the results in practically every case be thoroughly satisfactory. External “tabs” (old piles) may be snipped off under cocaine or ethyl-chloride anesthesia. Marginal (chiefly external) tumors may be cut around, ligated, and removed either under general or under the influence of H-M-C and local anesthesia.

For the excision, ligation or removal of internal hemorrhoids by means of clamp and cautery, general anesthesia is essential. Any of these procedures demands thorough divulsion of the anal sphincter. The clamp and cautery method properly used is followed by the least postoperative pain, and the result is decidedly good. As we already have stated, hemorrhoids on the margin of or external to the internal sphincter must, under no circumstance, be injected.

We suggest that you let such local physician as you may select make a thorough

examination and report his findings, when we shall be in position to advise you more fully.

We learn with great pleasure of your successful use of H-M-C. Under the influence of H-M-C and anesthaine, practically any minor operation can be performed, with a minimum of discomfort to the patient as well as operator. As a closing advice, let us urge upon you the desirability of having rectal surgery performed only by a physician having experience in this work.

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QUERY 6103.—“Pylonephritis. Dysentery.” W. G. S., Alabama, asks advice in a case of “hysteria or neurasthenia.” “The patient,” he writes, “is a married woman, 24 years of age, who has been having attacks of her trouble since her first labor, three years ago, when she was taken with convulsions. She asserts that at that period pus from her right kidney was discharged with the urine. She now is extremely debilitated and confined to bed. Her tongue is heavily coated. Strong sedatives, containing an opiate, must be used to quiet her. She has ‘intestinal indigestion’ and complains of pain over the kidney originally affected. She imagines that all and everything is the matter with her, and it really does seem as if many things were amiss. What will build her up, correct the disorder of the tract (her abdomen is swollen all the time), and quiet her nerves?”

“Another question: What will prove really helpful in chronic dysentery—the patient being an old lady?”

To prescribe intelligently for your patient, doctor, we must have a much clearer idea of basal pathological conditions; it is more than possible, though, that she has pyelonephritis and that the right kidney perhaps is virtually a pus-sac.

Institute a thorough physical examination, doctor, and particularly look into the question of tuberculosis, pelvic derangements, and elevated temperature. Then, with your report, send us a specimen of her urine (4 ounces from the mixed 24-hour output, stating the total quantity voided); also (preferably) a blood-smear, for examination, by our pathologist. With this, we shall be in position to aid you more effectively.

If the woman merely is a hysteric, thorough elimination, supplemented by tonic reconstructants, will prove sufficient; however, we fear the condition is much more serious.

Basing your medication upon the general symptomatology, you might, provisionally, put the woman on the following: Arbutin, gr. 1, and hexamethylenamine, grs. 2 1-2, to

be taken every three hours, with a glass of thin barley-water, or, if she can drink it, just plain hot water. Also: papain, gr. 1; pepsin, gr. 1; berberine hydrochloride, gr. 1-32; strychnine sulphate, gr. 1-128; such a dose fifteen minutes before eating. Furthermore, an hour after dinner and supper, a dose of chionanthoid compound. In addition, wash out the bowel every second or third day with copious enemas of the customary salt solution at body-temperature. For toning, have the woman take an epsom-salt sponge-bath (1:32) at equal intervals. Be very particular as to the diet. Impress upon her the fact that she will get well; making this more positive after the biologic specimens have been examined and treatment is based upon the pathologist's report. Do not forget, however, that there is just a possibility that nephrectomy may be necessary.

As to dysentery, emetine now is known to be the most effective remedy for the amebic form of this malady; while it also sometimes proves effective in the bacillary variety. Here, also, before we decide upon our course, we first must definitely ascertain the basal pathology. It would be well for you to send a specimen of the patient's feces, for examination.

QUERY 6104.—“Retroversion and Retroflexion of Uterus.” C. F., Nebraska, has in his care a particularly troublesome case of retroversion of the womb. The patient is 21 years old, married three years, and gave birth to a child one year ago. She is inclined to be “fleshy” and enjoys comparatively good health, with the exception of some catamenial cramps and pain in the back upon unusual exertion. It seems that the retroversion existed as long as five or six years ago. The womb was replaced soon after her marriage, but did not stay “put.” After the birth of the child it spontaneously assumed a normal position, but gradually descended again when the patient got up.

“Recently, when the woman was going upstairs, a certain movement was followed by a sudden strong pain felt in the uterine region, and a subsequent examination showed that the womb had once more assumed its normal position. This occurred after a brief course of medication with macrotys. Soon, however, the uterus again prolapsed. Packing has not proved helpful. Since the birth of the child, the woman has been troubled somewhat with a rather thick yellowish leucorrheal discharge from the uterus. Gen-

erally there is some tenderness in that region. Please describe the best treatment.”

Needless to say that it is impossible to express an opinion as to the best method of treating retroversion or retroflexion of the womb generally, although it would be a comparatively simple matter, after a thorough examination, to say what should be done in any particular case.

In retroversion, especially, the condition of the pelvic floor, pelvic organs, ligaments, and the retentive power of the abdominal cavity must be considered. Where the pelvic floor for any reason is unable to afford proper support and, moreover, there is undue abdominal pressure, it is very easy for the uterus to be displaced backward; and to secure and maintain a normal position by no means is a simple thing.

As you are aware, doctor, posterior displacements are much more frequent than any other form and are more frequently observed in parous than in nulliparous women. After the menopause, the atrophied uterus nearly always is displaced backward—retroverted (not, retroflexed), although, as a matter of fact, it is almost impossible in a uterus of normal size for retroflexion to occur without some degree of version. Nearly always both forms of displacement exist in the same case.

Treatment must, of necessity, depend upon causative conditions. These may be classified thus: (1) those destroying the supporting power of the floor; (2) those lessening the sustaining action of the pelvic organs; (3) those weakening the retentive power of the abdomen; (4) those interfering with the strength of the uterine ligaments.

In cases where pelvic lesions are present (that is, tumors, adhesions, and other gross conditions that push or pull the womb out of its normal situation), operation, of course, is essential. The idea, therefore, that a woman having a retroverted uterus can be cured by the haphazard application of tampons or the use of an intrauterine stem or ring-pessary is erroneous.

In the discussion of the treatment, some excellent authorities put their cases into two classes, namely, recent ones (less than one year old) and chronic cases (those of longer duration).

After the uterus has been displaced for some time, the tissues and ligaments are so degenerated that it is impossible for them to regain their normal contractility; hence, all forms of local, mechanical, or general treatment (which possibly might effect a cure in a

recent case) must prove useless. In a recent case, treatment, based upon a clear conception of exact conditions, must be continued for not less than twelve months; then, if at the end of that period normal conditions have not been reestablished, the displacement must be regarded as a chronic one and treated accordingly.

It is impossible for the present writer to outline here the various procedures necessary to remove or correct causative conditions. The method of replacing the retroverted uterus is perfectly described in all recent textbooks on gynecology. Ashton's "Gynecology," as an example, contains a most excellent chapter on this subject.

If, after studying the subject carefully, you desire to ask any definite question, or think we can aid you to secure results in any particular case, we shall be pleased to serve you to the extent of our ability. Do not, however, forget, doctor, that, in order to enable us to formulate an intelligent opinion, we first must have in mind a clear clinical picture.

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QUERY 6105.—"Distilled Water for Drinking-Purposes." J. H. M., Kansas, asks our opinion as to the advisability of giving distilled water to children to drink. "Some physicians," he says, "hold that children do not get enough of the calcium salts when they drink distilled water exclusively."

The query-editor does not believe that, ordinarily, it is desirable to confine children to distilled water as a beverage. Waters vary materially in their composition, but pure water—that is, water free from pathologic microorganisms and gross debris—without doubt is preferable to the distilled article. It cannot be questioned that the modern tendency to purify or denature everything we eat or drink is leading to physical degeneration. Witness the reduced stature, imperfect teeth and bones and lack of resistance of the rising generation, in fact, even of their parents; comparing them, if you please, with the human specimens of fifty or seventy-five years ago, who ate unprocessed flour or (better yet) whole meal, and unprocessed meats and vegetables, and who, whenever thirsty, drank freely of good spring- or well-water, cider, and milk.

It is quite true that the growing child requires a certain amount of lime, and that, if we distil the water and remove from their food every trace of this and other essential cell-salts, we hardly can expect men to grow up rugged and possessed of the physical

force necessary to resist the diseases and the strain of modern life. Of course, it is possible for water to contain a harmful excess of calcium salts. When this condition is known to exist or is suspected, distillation would prove desirable; although boiling and sedimentation is preferable, because of leaving some calcium and all the alkali salts.

We cannot here discuss the subject as fully as we would wish. We are aware, of course, that the rather extensive, though temporary, use of distilled water on shipboard and elsewhere has not been followed by any bad results; neither are we unmindful of the fact that in certain regions where limestone formations and alkaline deposits occur gastric and intestinal disturbances of some kind follow the constant use of the local waters. On the other hand, people using distilled water on shipboard do so for only a comparatively short period and, in the great majority of cases, are full-grown.

Your question applying particularly to growing children, we may add that, in our belief, distilled water, under ordinary circumstances, is not at all more desirable for them than pure ordinary water.

It is claimed by some writers that the food should provide all necessary salts in abundance; but this, in modern life, it does not do. This subject may be taken up again at length in a subsequent issue of this journal.

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QUERY 6106.—"Infantile Hernia." L. I. B., Nebraska, asks what is the best form of support for congenital hernia in an infant. "The ordinary trusses on the market," he writes, "I find impractical—for several reasons. They are unfit for use after being soiled and, besides, the infant soon outgrows a truss; consequently, it is necessary to have at service several trusses at once, and these, again, must be changed from time to time for larger ones. Furthermore, the 'button and band' contrivance does not answer where the opening is large and the intestines descend into the scrotum. Can you suggest anything short of operation? How early would you advise operating?"

Hernia, as you know, is not uncommon in infants, those of the inguinal and umbilical type being those most often met with. Inguinal hernia may occur in both sexes, although the condition is observed in boys twice as often as in girls. This greater tendency to hernia in the male, as also their preponderating occurrence on the right side, depend upon certain developmental changes associated with the descent of the testes

from the abdomen. There is much evidence that all inguinal hernia in children result from imperfect closure of the processus vaginalis testis and are, in the strict sense of the word, congenital, although the condition may not be recognized for weeks, months or even years after birth.

The object of the physician must be, of course, to assist nature to complete the closure of the processus vaginalis, by preventing the descent of the abdominal viscera. This may be accomplished by an operation and removal of the hernial sac or (sometimes) by applying an appropriate truss. Never should a child be left untreated. Some hold that invariably the hernia should be obliterated by an operation; others insist that the wearing of a truss suffices in every instance. The truth doubtless lies somewhere between these extremes.

The radical operation is simple and effective and, were it not for the fact that undoubted cures have followed the wearing of a truss, it would be urged without exception. However, operation should be insisted upon when the child is more than 4 years old, unless, of course, there are good reasons against any form of operation; but also in all children who are less than 4 years, but in whom no truss can be made to retain the rupture. The operation, of course, is exactly the same as for an adult.

If a truss is to be applied, it should consist of a light steel spring coated with rubber, and the pad be of such size that it covers the entire length of the inguinal canal, but not pressing upon any part of the pubic bone. The measurements must be carefully made. It is impossible to give a rule as to how long a truss should be worn; roughly speaking, however, for at least a year after all signs of protrusion have disappeared; two years is a safer rule.

It is impracticable to single out any particular kind of truss for recommendation; still, on the whole, the foregoing will answer most of your points. The need of a set of trusses is obviated by heeding the injunction of getting a rubber-coated truss—for which, if the mother prefers, she may make a set of cloth sheaths, to be removed and washed. Then the purchase of one new truss from time to time cannot, surely, be considered a hardship.

QUERY 6107.—“Retention Neurosis?” C. E. D., Ohio, describes the case of a man, 50 years of age, mental worker, who complains of a burning pain about the knees and the sciatic region of both thighs coming on after sitting still and more particularly after close application to any mental work. Otherwise, he is in the best of health. His complaint is, that it interferes with his work, making him irritable and nervous, and is compelling him to get up and walk around. This pain, which has troubled him for the past three years, is never severe, but extremely annoying and has been growing worse lately. Tests of the urine and blood have proven absolutely negative. At first there was a little indicanuria, but that has disappeared. He has been on a meatless diet, regular course of physical exercises, and hygienic training for five months. His general health and endurance are above the average for his age. He is a large man, weighing about 200 pounds but does not carry very much surplus fat. He avers having experienced a burning sensation in the soles of his feet more or less constantly ever since he can remember—has to stick his feet out of the bed-covers at night; and his mother had the same trouble. Syphilis may be excluded. Several good nerve-specialists consulted, failed to do him good, he asserts. “Can you surmise what may be the cause and suggest treatment?”

Although you say, doctor, that urine and blood tests have proved absolutely negative, we suggest that, first of all, you forward to our pathologist 4 ounces of urine from the 24-hour output, stating total quantity voided. That will enable us to get a clear idea of the condition of your patient's body-chemistry.

The trouble hardly can be of the nature of neuritis, so, we rather are inclined to regard it as a neurosis of toxic origin. What is the condition of the prostatic gland? Is there proctitis or marked constriction of the anal sphincter? Are the reflexes (especially patellar) normal or exaggerated? It frequently is difficult to discover the origin of such vasomotor disturbances; so, it would be interesting to find out whether the surface temperature is increased or reduced, especially during the attack. Note also whether there is pallor, blueness, mottling or redness of the involved surfaces. Then favor us with a full report.





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